

Family Functioning and its Relationship to Adolescent Mental Health

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June, 2015

Research submitted in partial fulfilment of the requirements for the degree of Doctor
in Clinical Psychology (DClinPsy), Royal Holloway, University of London.

Acknowledgements

I would like to thank all of the adolescents who participated in the study, along with the teachers who supported the project, gave up their lesson time, and enabled data collection to run as smoothly as possible! I am grateful to my supervisor, Helen, for her guidance throughout the project, and Louise Paque for her support with recruitment. Finally, a big thank you to Nij, whose encouragement and endless support kept me going throughout the entire process.

Abstract

In recent years, the field of developmental psychopathology has seen a shift away from studying mental illness towards more strengths-based conceptualisations of mental health, often termed 'well-being'. Whilst family functioning is a well-established risk factor for developmental psychopathology, relatively little is known about its contribution towards adolescent well-being. Where research has been conducted in this field, family functioning is often poorly operationalised using narrow conceptualisations, such as parent-adolescent conflict. Furthermore, our understanding of the potential processes underlying the link between family functioning and adolescent psychopathology remain poorly understood.

The aim of the present study was to examine the association between family functioning and adolescent well-being. The study also explored the potential mediating role of well-being in the relationship between family functioning and psychopathology. Using a cross-sectional design, students aged 13-16 years ($N = 112$) completed self-reported measures of family functioning, life satisfaction, psychological well-being and internalising and externalising behaviours. The results revealed that poorer family functioning was significantly associated with lower levels of adolescent life satisfaction and psychological well-being. Findings from multiple regression analyses showed that the family's ability to adapt to difficulties appeared to be uniquely associated with both life satisfaction and psychological well-being. Lastly, life satisfaction was found to mediate the relationship between family functioning and externalising behaviours, whilst psychological well-being mediated the relationship between family functioning and internalising behaviours.

The findings highlight the important role of the family on adolescent well-being, and suggest that well-being may provide a pathway by which family functioning influences adolescent psychopathology. The results draw attention to the potential clinical utility

of involving families in well-being interventions, particularly to supporting adaptability and problem solving. The results also highlight the benefits of promoting adolescent life satisfaction and psychological well-being in both the general and targeted populations to guard against the development of internalising and externalising behaviours.

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CHAPTER 1: INTRODUCTION

CHAPTER OVERVIEW

One of the most well known risk factors for the development of mental health problems in adolescence is a dysfunctional family environment, including dysfunctional patterns of interaction and problem solving (Winek, 2010). Little is known, however, about the potential role of the family, and the way in which the family functions, on mental health or well-being in adolescence. Whilst this has been a growing area of interest in research over the past ten years, a number of limitations are noted in the existing literature.

The aim of the present study was to add to the well-being and mental health promotion literature by exploring the role that family functioning plays in this. The study focussed exclusively on adolescence, given that this is a vulnerable period for the onset of mental health problems and poor mental health. Adolescent mental health was defined in fuller terms than in previous research, to include both hedonic and eudaimonic aspects of well-being across social, emotional and psychological domains, as recommended by current guidelines (National Institute for Health and Clinical Excellence [NICE], 2012).

This chapter gives a brief overview of the concept well-being and its distinction from mental illness or psychopathology. The construct of family functioning is then introduced, along with literature outlining its relationship to adolescent mental health, including well-being. A summary of the limitations of the exiting literature is offered, including conceptual and methodological issues, along with suggestions of how these might be addressed. Finally, the current study is outlined alongside a series of hypotheses informed by the existing literature.

ADOLESCENT MENTAL HEALTH

Most recent figures suggest that one in ten children aged between five and 16 suffer from a diagnosable mental health problem (Hagell, Coleman and Brooks, 2013; Office for National Statistics [ONS], 2012). Adolescence is a particularly vulnerable period for the onset of mental health problems, with the rates of mental disorder rising steeply in middle to late adolescence (House of Commons, 2014). Furthermore, epidemiological research suggests that the onset of over 50% of adult mental health problems is thought to occur before the age of 15, and 75% before the age of 18 (Department of Health [DoH], 2013). The increased susceptibility to mental health problems during this period of transition is thought to occur as the adolescent begins to form their own identity, and as a result may experience changes in their perception of self and others (Arnett, 2007; Ben-Zur, 2003). Mental health problems in adolescence present a significant societal and economic challenge, in that adolescents with poor mental health are less likely to achieve academically or gain employment, have poorer physical health and are more likely to engage in substance misuse or anti-social behaviour (DoH, 2013; Goodman, Joyce and Smith, 2011).

The above findings highlight the importance of intervening at as early an age as possible in the context of mental health, a notion which is supported by numerous governmental strategy and policy documents (DoH, 2011a; DoH, 2011b). In light of this, research in the field of child and adolescent mental health has focussed on the development and implementation of effective, evidence-based treatments. For example, as a result of these developments, the UK has seen the launch of such initiatives as the Children and Young People's Improving Access to Psychological Therapies programme in 2011, aimed at equipping services with the skills required to provide evidence-based interventions for children and young people.

Despite the development of evidence-based interventions, there has been growing recognition in recent years that treatment alone is not in itself sufficient in reducing the burden of adolescent mental health problems. The increasing consensus is that research efforts and governmental strategies should also be aimed towards the prevention of mental illness (by reducing risk factors) and the promotion of mental health (by fostering psychological strengths). Whilst this view is widely recognised, the research and evidence base relating to the promotion of mental health trails behind that of treatment (DoH, 2013). Indeed, the British Psychological Society (BPS) highlights that “there should be an emphasis on and investment in health promotion work, with particular attention to adolescent mental health” (BPS, 2009, p. 1).

In recognition of the importance of mental health promotion, particularly for child and adolescent populations, the focus of mental health research and policy in recent years has moved away from examining symptoms of mental illness and psychopathology, to more strengths based, positive indicators of mental health, often referred to as ‘well-being’. Whilst research in the field of adolescent well-being has begun to emerge, it continues to lag behind that of developmental psychopathology, and has attracted criticism for its poorly defined terms and the use of inappropriate or proxy measures (DoH, 2014).

DEFINING WELL-BEING

The task of defining well-being remains a challenge for researchers in the field of mental health, with some researchers arguing that there is still no clear definition (Dodge, Daly, Huyton and Sanders, 2012; ONS, 2011). Whilst mental illness is typically defined as the presence of symptoms or disorders, well-being has been much more difficult to define. Historically, given that research on mental illness has traditionally focussed on the presence of psychological disorders and distressing symptoms, well-being (as opposed to ill-being; Diener, 2006) has been

conceptualised purely as the absence of psychological dysfunction (Fava, Rafanelli, Cazzaro, Conti and Grandi, 1998; Ruini and Fava, 2012; Ryff and Singer, 1996; Wood and Joseph, 2010). The World Health Organisation (WHO), however, challenged this assertion, stating that health is 'not merely the absence of disease or infirmity' (WHO, 2001, p. 1), but rather encompasses a condition of physical, social and mental well-being. In addition to this, the WHO argues that an individual in a state of mental well-being is able to recognise their own abilities, copes well with the stresses of life, works productively and contributes to their community (WHO, 2004).

The recognition that mental health research had traditionally neglected to study positive individual traits and experiences, and how their development can be facilitated, led to the emergence of the positive psychology movement (Duckworth, Steen, & Seligman, 2005; Keyes, 2007). This movement has gained momentum over the past 20 years, with proponents arguing that well-being is defined by the presence of individual strengths and experiences of happiness, rather than a lack of psychological distress (Huebner, Gilman and Suldo, 2007).

Well-Being in the Adult Literature

In the adult literature, psychologists broadly categorise well-being into two main approaches, the hedonic view and the eudaimonic view, with each offering its own distinct way of defining and measuring well-being:

- i. *Hedonic view:* This approach, which is thought to have roots in the philosophical idea of hedonism (Ryan and Deci, 2001), views well-being as the extent to which an individual experiences subjective positive feelings, such as positive affect, or happiness. Related to this hedonic view is the concept of subjective well-being (Diener, 1984), which purports that well-being

is characterised by high global life satisfaction, positive affect and the absence of negative affect.

- ii. *Eudaimonic view*: This approach to well-being places less emphasis on the subjective experiences of happiness, and is instead interested in the presence of individual characteristics or experiences which are considered important for well-being. In the field of psychology, one of the most popular models of eudaimonic well-being is Ryff's (1989) model of psychological well-being. Ryff identified a set of characteristics constituting psychological well-being, which fall in to six overarching dimensions: 1) self-acceptance; 2) personal growth; 3) purpose in life; 4) positive relations with others; 5) environmental mastery (i.e. the ability to choose an environment which meets one's needs) and 6) autonomy.

Whilst the above hedonic and eudaimonic approaches offer their own conceptualisations of well-being, Deci and Ryan (2008) report that the two approaches are highly correlated, suggesting that they are not completely distinct from one another. Many researchers have begun to approach well-being as a complex, multidimensional phenomenon which is best informed by aspects of both approaches (Duckworth, Steen and Seligman, 2005; ONS, 2011; Ryan & Deci, 2001). Building upon Ryff's (1989) model of psychological well-being, Keyes (2005) defined well-being as the presence of positive affect or a high level of life satisfaction along with a high score on the six dimensions of psychological well-being (Ryff, 1989). Furthermore, MacLeod (2014) suggests that it may be more helpful to adopt a dimensional model of well-being, whereby well-being is viewed on a continuum from extreme subjective approaches (in line with a more hedonic view) to extreme objective approaches (in line with a more eudaimonic view, where well-being can be objectively measured, for example, by quality of relationships, achievements etc.).

Despite the complexity of the debate around how well-being should be defined and measured, psychologists have traditionally focussed on the correlates of well-being rather than theories of well-being. It is important, however, that psychologists pay some attention to theories of well-being when conducting research in this field, so we are able to determine what may or may not be of value (MacLeod, 2014).

Well-Being in the Child and Adolescent Literature

Historically, the positive psychology movement has focussed on the well-being of adults rather than that of children or adolescents. In recent years, however, attempts have been made to extend the definition and measurement of well-being from adults to children and adolescents. Inevitably, this has not been an easy task. Despite a growing demand for positive, strengths based measures, they have failed to fully penetrate policy discussions and research (Lippman, Moore and McIntosh, 2011). Commonly cited reasons for this lack of progress include the questionable quality of the measures, along with the length and practicalities of using certain measures (Lippman et al., 2011). Furthermore, the well-being literature has attracted criticism for using poorly defined constructs and definitions, alongside invalid metrics (DoH, 2014). The development and use of measures of well-being has also been complicated by children's levels of understanding and literacy (The Children's Society, 2013). Finally, the adult definitions of well-being, upon which many measures are based, have been found to be unhelpful or inappropriate for use with children or adolescents (The Children's Society, 2012). Indeed, where researchers have attempted to apply adult definitions and measures of well-being to children and adolescents (e.g. Ryff's (1989) Scales of Psychological Well-Being), this has resulted in inadequate levels of reliability, with Chronbach's alpha ranging from .16 to .34 on dimensions of Ryff's (1989) Scales of Psychological Well-Being (Vescovelli, Albieri and Ruini, 2014).

Well-being research is now focussed towards developing more appropriate definitions and measures of well-being for children and adolescents (The Children's Society, 2013), with NICE (2012) defining child and adolescent well-being across three domains:

- i. *Emotional well-being*: being happy, and not anxious or depressed.
- ii. *Psychological well-being*: being autonomous, resilient and attentive; able to problem solve and manage difficult emotions.
- iii. *Social well-being*: having good relationships with others and not having behavioural problems.

The current study aimed to take an age appropriate and multidimensional approach to the definition and subsequent measurement of well-being in adolescence, including aspects of both the hedonic approach (i.e. life satisfaction) and eudaimonic approach (i.e. the presence of individual strengths, or general psychological well-being), as recommended by Keyes (2005). The measures selected to assess well-being (see Method section for further details on measurement) also comprised aspects of emotional, psychological and social well-being, in line with the above definition in relation to children and adolescents (NICE, 2012).

In the child and adolescent literature, life satisfaction is considered to be a cognitive appraisal of various aspects of the child's life, including external contexts such as school, home environment and neighbourhood, as well as important relationships, such as those with parents, peers and teachers (Lippman, Moore and McKintosh, 2011; Suldo and Huebner, 2004a). General psychological well-being, on the other hand, places more emphasis on factors which are considered internal to the individual, such as their strengths, abilities and inner resources (Clark et al., 2011; The Children's Society, 2013). As with the adult literature, life satisfaction and

psychological well-being are thought to be distinct but related concepts, with existing research showing a moderate degree of shared variance between the two variables (Clark et al., 2011; Tennant et al., 2007).

The Relationship between Mental Illness and Well-Being

A further debated topic within this field concerns that of well-being and mental illness as distinct, independent dimensions. The WHO (2014) states that well-being is not simply the opposite of mental illness, arguing that when mental illness is alleviated, well-being is not naturally restored. Indeed, existing research suggests that it is possible for an individual to have a diagnosable mental illness whilst maintaining a high level of well-being. Likewise, the reverse is also true, whereby an individual may have a low level of well-being without having a mental illness (Bergsma, ten Have, Veenhoven and De Graaf, 2011; Weich et al., 2011).

The recognition that mental well-being is distinct from mental illness has led to growing interest in the use of strengths based measures of mental health in the field of clinical psychology. Joseph and Wood (2010) argue that in using purely symptom based measures, stemming from the medical model of mental illness, researchers and clinicians are limited to understanding only one small part of the human experience. As clinicians and researchers, however, psychologists should be concerned with the whole spectrum of mental health, including well-being. Joseph and Wood (2010) therefore argue for the need to include measures of positive factors (i.e. psychological strengths) in clinical practice and research. There is also emerging evidence which suggests that positive factors are more able to predict psychological distress than negative factors or symptoms of mental illness (Wood & Tarrier, 2010) which further supports the need to include strengths based measures in psychological assessment.

The recognition of the importance of measuring positive functioning has led to the development and inclusion of measures of well-being, such as the Warwick-Edinburgh Mental Well-Being Scale (WEMWBS; Tennant et al., 2007), in clinical and research settings. This positively worded, strengths focussed measure is now widely used to supplement other measures of mental illness in clinical and research settings (ONS, 2012), and has been validated in a large number of studies (Tennant et al., 2007). Evidence from survey data using both the WEMWBS and a measure of depression (the General Health Questionnaire-12; Werneke, Goldberg, Yalcin and Ustun, 2000) suggests that the two concepts are not polar opposites, but are negatively correlated to different degrees, indicating both overlap and distinctiveness (Clarke et al., 2011; Tennant et al., 2007).

Finally, psychologists within the positive psychology framework propose that well-being, in terms of psychological strengths, serves as a protective factor against the development of mental illness (Seligman and Csikszentmihalyi, 2000; Suldo and Huebner, 2004a). Researchers have attempted to explain this buffering effect, and suggest that as people are helped to flourish past their neutral state, their long-term resilience is increased, thereby minimising the impact of life stressors (MacLeod, 2012). It therefore follows that the prevention of mental illness or psychopathology is most effective when efforts are focussed on promoting individuals' strengths, rather than repairing their weaknesses or deficits. As a result, well-being, and the promotion of individual strengths and resources, has been placed high up on the national health agenda, particularly for adolescents (NICE, 2009; Layard, 2008).

Well-Being Interventions

Seligman and Csikszentmihaly (2000) argued in their seminal paper that whilst the concepts of happiness and flourishing have been studied by psychologists for over 40 years, the development of evidence-based interventions has failed to receive as

much attention. Since its publication, there has been a rapid growth in the number of evaluation studies examining the effectiveness of well-being programmes, aimed at enhancing both hedonic and eudaimonic aspects of well-being. Bolier et al. (2013) conducted a meta-analysis of 39 randomised controlled positive psychology interventions with adults (N = 6,319), measuring aspects of either hedonic well-being (e.g. life satisfaction or positive affect), eudaimonic well-being (e.g. Ryff's (1989) Scales of Psychological Well-Being) or symptoms of depression. Various types of positive psychology interventions were included in the meta-analysis, such as: practicing gratitude (Emmons and McCullough, 2006); well-being therapy (Fava et al., 2005); goal directed thinking (Feldman and Dreher, 2012); positive future thinking (Peters, Flink, Boersma and Linton, 2010); positive bibliotherapy (Frieswijk, Steverink, Buunk and Slaets, 2006), and exercises in thinking about personal strengths and positive life experiences (Lyubomirsky, Sousa and Dickerhoof, 2006; Seligman, Steen, Park and Peterson, 2005). The positive psychology interventions were found to significantly enhance hedonic and eudaimonic well-being, and reduce symptoms of depression, with effect sizes in the small to moderate range. The authors conclude that positive psychology interventions may provide an accessible and non-stigmatizing way of strengthening psychological resources and resilience, particularly in the context of mental health promotion or recovery.

Recent governmental reports have called on commissioners to recognise the crucial role that schools play in promoting the mental health and well-being of children and adolescents in the UK, suggesting they present the ideal setting from which to deliver positively focussed, universal interventions (DoH, 2014; House of Commons, 2014), Weare, 2015). Indeed, the use of positive psychology interventions in education is emerging outside of the UK (Gillham and Reivich, 2004; Knoop, 2011; Ruini, Belaise, Brombin, Caffo and Fava, 2006; Ruini et al., 2009; Wong et al., 2009). In Italy, for

example, researchers evaluated the effectiveness of a six-week school-based well-being programme with high school students (N = 227) compared to an attention-placebo group (Ruini et al., 2009). The well-being programme focussed on enhancing well-being in line with Ryff's (1989) dimensions of psychological well-being, which included building positive interpersonal relationships, recognising personal skills, abilities and positive moments in life, as well as discussing hopes for the future. Intention to treat analyses revealed that the well-being programme significantly enhanced the students' well-being (according to scores on Ryff's (1989) Scales of Psychological Well-Being), and decreased students' experience of anxiety and somatisation compared to the control group.

Attempts have been made by researchers in the UK to develop school-based programmes with the aim of promoting mental health and resilience during adolescence (Adi, Kiloran, Janmohamed and Stewart-Brown, 2007; Challen, Noden, West and Machin, 2011). These interventions, however, have fallen trap to some of the limitations outlined above, in that 'resilience' and 'well-being' has been poorly defined and inappropriately measured using symptom based assessment tools, with interventions focusing on reducing distress (i.e. symptoms of depression or anxiety). Furthermore, systematic reviews and guidelines relating to the promotion of mental health in school settings consistently raise the need for the involvement of the wider community in these interventions, particularly parents and other family members (Adi et al., 2007; Cheney, Schlosser, Nash and Glover, 2014; DoH, 2013; NICE, 2012). Despite the well-known impact of the family on child and adolescent development, well-being interventions have rarely considered the role of the family in mental health promotion. As such, the evidence base relating to how the family functioning relates to adolescent well-being and how to best involve the family in well-being interventions remains poorly formed.

DEFINING FAMILY FUNCTIONING

‘The Family’

Systemic theorists suggest that definitions of ‘the family’ are shaped by the beliefs and discourses which are characteristic of the society we live in at that time (Dallos and Draper, 2010). According to Minuchin and Fishman (2004), the family is typically hierarchically organised into subsystems, which are informed by the boundaries and level of authority within the family. According to systemic theory, the family will also have their own belief system, that is, a set of common ideologies, explanations and expectations, all of which are influenced by personal experiences, traditions and cultural and societal discourses. The family’s belief system informs each members’ perceived role within the family and their expectation of others. These belief systems also influence familial patterns of communication and interaction, as well as shaping family members’ behaviour by influencing their perceived options and subsequent choice of behaviour (Dallos and Draper, 2010).

Models of Family Functioning

The term ‘family functioning’ refers to the way in which family members interact with, react to, and treat one another (Winek, 2010), and hence is best understood when considering the whole system, rather than single processes or each family member in isolation (Walsh, 2003). Various models of family functioning exist within the family systems literature. These models are grounded in systems theory and are often concerned with the family’s ability to complete essential tasks which contribute to each family member’s biological, social and psychological development (Barney and Max, 2005; Franklin, Cody and Jordan, 2004; Skinner, Steinhauer and Sitarenios, 2000).

One popular theory concerned with family functioning across the life span is the family life cycle model (Carter and McGoldrick, 1989). This model splits the family life

course in to a series of developmental stages that define each member of the family system. Each developmental stage involves a set of transitions that place stress upon the family system. Stress is thought to be at its greatest point in the system during these transitional episodes, and hence it is during this period when the family system is at the greatest risk of dysfunction (Carter and McGoldrick, 1989).

Whilst there is great variation in the way in which family functioning is conceptualised and subsequently measured, review articles of the extant family systems literature generally characterise well-functioning families as cohesive, flexible and self-reflective (Pederson and Revenson, 2005). Furthermore, in considering how to best assess and measure functioning, these review articles have indicated five important dimensions, based on factor analysis, including: perceived hostility or danger; communication style; general affect within the family; flexibility and adaptability, and clarity of roles (Janes, 2005; Stratton, Bland, Janes and Lask, 2010). High quality measures of family functioning (such as the Systemic Clinical Outcome Routine Evaluation Scale; Stratton et al., 2010) which assess functioning with these domains in mind have now been developed and validated, and are gaining popularity in both clinical and research settings (Clinical Outcomes Research Consortium [CORC], 2014).

Family Functioning and Adolescent Development

Psychological models of child and family development can be drawn upon to support our understanding of how family functioning can influence adolescent adjustment. Following on from the above family life cycle model, Carter and McGoldrick (1989) suggest that one important developmental stage includes the transition from childhood to adolescence, whereby the adolescent begins to negotiate more complex relationships with peers and develop an identity as separate from their family. During this period, parents too are adjusting to allowing the adolescent more autonomy, as

well as having to adjust to midlife marital and career issues, whilst taking on greater levels of responsibility for caring for their own parents. It therefore follows that adolescence presents a period in family life which places great stress upon the family system and the adolescent themselves, leaving the system and individuals within the system vulnerable to adverse outcomes.

Furthermore, Bronfenbrenner's (1994) social ecological model of development suggests that children and adolescents live in a social ecology of interconnected systems which impact both directly and indirectly upon the child or adolescent's behaviour. These influences are reciprocal and bi-directional in nature, in that the child or adolescent influences and is influenced by the interactions within their environment. Accordingly, these interactions contribute to the development of the child or adolescent's behaviour. This social ecological model hypothesises that environments which are closest to the adolescent have the greatest influence on their behaviour and development, namely the home and school environment. This model has impacted greatly upon child development literature, and has been central to the development of evidence-based interventions, such as multi-systemic therapy, aimed at reducing antisocial behaviour in young people (Shiedow et al., 2014). Given the impact of this model and its resulting clinical application, it is not surprising that most research into the impact of the environment on adolescent development has focussed primarily on the contexts of home and school (Walker and Shinn, 2002).

Existing research suggests that family functioning influences a number of developmental outcomes for adolescents, such as academic attainment, the ability to form positive relationships, and physical and mental health (Duchesne, Vitaro, Larose and Tremblay, 2008; Fergusson and Woodward, 2002; Suldo and Shaffer, 2008). Given its impact on later life adjustment, mental health is considered to be one of the

most important developmental outcomes for adolescents (Degoede, Spruijt and Maas, 1999; De Ross, Marrinan, Schattner and Gullone, 1999).

FAMILY FUNCTIONING AND ADOLESCENT PSYCHOPATHOLOGY

The relationship between different family variables and adolescent psychopathology, including symptoms of anxiety, depression, and behavioural problems, has been well-researched over the last 20 years. Correlational studies have found that parental factors, such as parenting style, attachment, problem solving ability, level of warmth, and interparental conflict, have all been linked to symptoms of depression and anxiety (for a review, see Bogels and Brechman-Toussaint, 2006; Yap, Pilkington, Ryan and Jorm, 2014); low self-esteem (De Ross et al., 1999; Phillips, 2012); behavioural difficulties (Han and Grogan-Kaylor, 2013; Heckel, Clarke, Barry, McCarthy and Selikowitz, 2013), and substance misuse (Chappel, 2011).

As the evidence base for the impact of the family environment on adolescent psychopathology grows, further studies are emerging whereby family functioning is assessed more holistically, using multidimensional measures. This, however, remains relatively limited. Renzaho, Mellor, McCabe and Powell (2013) examined the relationship between family functioning and behavioural difficulties in a sample of children aged four to 12 (N = 3,370) in Australia. Family functioning was assessed using the McMaster Family Assessment Device (Epstein, Baldwin and Bishop, 1983), a 60-item questionnaire with seven subscales, measuring: 1) problem solving, 2) communication, 3) role clarity, 4) affective responsiveness, 5) affective involvement, 6) behaviour control and 7) general family functioning. The researchers, however, administered just 12-items from the questionnaire in order to assess the overall health or pathology of the family, thereby limiting the study's internal validity. Child behavioural difficulties were measured using the parent reported Strengths and Difficulties Questionnaire (Goodman, 1997). The results indicated that, after

controlling for demographic variables, parents who reported higher levels of family dysfunction had children with higher levels of behavioural problems compared to parents who reported healthier levels of family functioning. The findings, however, may have limited generalisability to the current study given the age of the children included in the sample. Furthermore, the study relied solely on parents' reports, which may be subject to bias or underreporting of difficulties.

Limitations of the Existing Research

Although the existing evidence base highlights the link between poor family functioning and negative outcomes in adolescence, there are a number of limitations with the existing literature. Firstly, the assessment of family functioning has often relied solely on the mothers' reports, rather than both mother and father, or the adolescents' (Demo and Acock, 1996; Savani, 2013). In addition to this, much of the existing research has failed to assess family functioning at the systemic level, instead choosing to focus on the impact of parental or dyadic processes, for example, parenting style or parent-adolescent conflict (Ben-Zur, 2003; Chappel, 2011; Savani, 2013). In some cases, aspects of family functioning have been assessed using single-item measures on a Likert scale (e.g. *How much conflict is there in your family?*, Bradley and Corwyn, 2000; *There are lots of bad feelings in my family*, Phillips, 2012) which limits the reliability and validity of assessment.

Most relevant to the current study is that researchers often claim to be assessing adolescent well-being, but fail to consider this in terms of positive indicators of mental health or the presence of psychological strengths. As stated above, the existing literature generally continues to conceptualise adolescent well-being as the absence of psychopathology, namely symptoms of anxiety and depression. Given the growing recognition of the role of mental health promotion and positive, strengths based

approaches in psychology, it is important to consider the impact of family functioning on psychological wellness, or positive indicators of adolescent well-being.

Finally, whilst the correlational studies outlined above highlight the relationship between family functioning and adolescent psychopathology, they do not consider the underlying mechanisms or pathways for this relationship, that is, how family functioning is related to adolescent psychopathology. This relationship and its underlying mechanisms will be returned to later in the chapter.

FAMILY FUNCTIONING AND WELL-BEING

The relationship between family functioning and positive indicators of well-being in adolescence is a less well researched area than that of adolescent psychopathology. A review of the available literature identified few existing studies which have attempted to examine this relationship. In the identified studies, researchers have focussed primarily on either hedonic aspects of well-being (e.g. how satisfied one is with their life) or eudaimonic aspects of well-being (e.g. purpose in life or existential well-being). Three studies were found by the same author examining both hedonic and eudaimonic aspects, but these were conducted with Chinese samples of adolescents (discussed further in the following sections). A summary table of the search terms used to inform this literature review is provided in Appendix A, along with their results.

Family Functioning and Hedonic Aspects of Well-Being

As with the psychopathology literature, much of the research examining the impact of family functioning on adolescent well-being has focussed on single dimensions of family functioning, such as parental style. For instance, researchers in Hong Kong (Chang, McBride-Chang, Stewart and Au, 2003) found that parent reported ratings of parental warmth were predictive of life satisfaction in adolescence (N = 74).

Furthermore, Suldo and Huebner (2004b) found that authoritative parenting (involving clear limit setting whilst maintaining a warm and open stance) was positively related to life satisfaction amongst a sample of American adolescents (N = 1,201).

The domain of familial conflict has also been examined in relation to adolescent life satisfaction. Demo and Acock (1996) found that mother-adolescent disagreement was the strongest predictor of adolescent life satisfaction in 12-18 year-olds (N = 850). This study, however, used previously unvalidated measures of familial conflict, which were found to have limited levels of internal consistency (with Chronbach's alpha as low as .34). Adolescent global well-being was also measured using a single item on a Likert scale (*How would you rate your child's overall well-being?*), thereby further limiting reliability and validity. Furthermore, the researchers did not consider the adolescents' perspective in this study, examining both parent-adolescent disagreement and adolescent well-being from the mother's perspective only. A later study attempted to address some of these methodological issues by including both the parents' and adolescents' views (Ben-Zur, 2003). The author found a significant relationship between the quality of the parent-adolescent relationship and adolescent life satisfaction. This further illustrates the association between the quality of the parent-adolescent relationship and the positive mental health of adolescents.

The association between acute and chronic stressors (including familial stressors, such as interparental conflict) on life satisfaction was explored in a sample of 152 adolescents (Ash and Huebner, 2001). Students aged 14-18 years completed self-reported measures of life stressors (Life Stressors and Social Resources Inventory-Youth Form; Moos, Fenn and Billings, 1988), locus of control (Nowicki-Strickland Locus of Control Scale; Nowicki and Strickland, 1971), and life satisfaction (Student's Life Satisfaction Scale; Huebner, 1991). Whilst both acute and chronic stressors were found to significantly predict adolescent life satisfaction, chronic stressors were found

to exert a larger effect. After controlling for the impact of acute stressful events (for example, significant life events), chronic stressors (including interparental conflict) were found to predict 19% of the variance in adolescent life satisfaction. This research, however, did not focus exclusively on the chronic stressor of poor family functioning. More recently, Chappel, Suldo and Ogg (2014) investigated the association between interparental conflict, life events and life satisfaction in adolescents in the United States ($N = 183$). Adolescents aged 11 to 15 years completed a 42-item, self-report measure of interparental conflict (Children's Perception of Interparental Conflict; Grych, Seid and Finchman, 1992) alongside self-report measures of life satisfaction (Students' Life Satisfaction Scale) and significant life events (The Life Events Checklist; Johnson and McCutcheon, 1980). The results indicated that interparental conflict was moderately and negatively associated with adolescent life satisfaction ($r = -.54$). Furthermore, interparental conflict was found to be the strongest predictor of life satisfaction amongst the different family variables included in the study, and accounted for 13% of the variance observed in adolescents' reports of life satisfaction.

In addition to the role that single factors, such as parenting style or interparental conflict, play in the development of adolescent well-being, it is important to consider more systemic and holistic conceptualisations of family functioning (Joronen and Astedt-Kurki, 2005). In line with this, Rask et al. (2003) examined the impact of general family functioning on adolescent life satisfaction. Finnish adolescents aged between 12 and 17 ($N = 239$) completed an indigenous, 66-item self-report questionnaire (based on the Family Dynamics Measure; Lasky et al., 1985) which measures family functioning across six domains: 1) individuation, 2) emotional closeness, 3) flexibility, 4) stability, 5) communication and 6) role clarity. Adolescents also completed a translated version of the 38-item Berne Questionnaire of Subjective Well-Being (Grob et al., 1991). Correlation analyses revealed adolescents' perception

of family functioning was positively related to adolescent subjective well-being. Specifically, family stability, emotional closeness and clear communication correlated most strongly with adolescent self-reported life satisfaction. Furthermore, regression analyses indicated that the dimensions of stability and emotional closeness predicted 52% of the variance in adolescent life satisfaction, supporting the notion that family functioning has a significant contribution to adolescent life satisfaction. The researchers, however, report that the subscales of family functioning and subjective well-being had limited reliability, with Chronbach's alpha reported to be as low as .56. This, therefore, may have compromised the study's internal validity.

Family Functioning and Eudaimonic Aspects of Well-Being

Attempts have been made to investigate the impact of family functioning using a more holistic conceptualisation of adolescent well-being, incorporating aspects of eudaimonic well-being. For example, a series of studies have been conducted examining the link between family functioning, life satisfaction and more eudaimonic aspects of well-being in Chinese adolescents (Shek, 1997; 2002; 2005).

In the first study of this series, Shek (1997) recruited 12-16 year olds (N = 429) from secondary schools in Hong Kong, along with their parents. Adolescents and their parents completed several measures to assess different dimensions of adolescent well-being, including psychopathology, life satisfaction, purpose in life, delinquent behaviour and academic performance. A Chinese version of the 36-item Self-Report Family Instrument (Shek, Lee, Ngai, Law and Chan, 1995) was also completed to assess family functioning, and was found to have high levels of internal consistency and temporal stability. Correlational analyses revealed that healthy family functioning was negatively related with psychopathology (i.e. symptoms of anxiety, depression, hopelessness and delinquent behaviour) and positively correlated with indicators of adolescent well-being (i.e. life satisfaction and purpose in life). Whilst the relationship

was the same for both parent and adolescent ratings, the correlation between family functioning and well-being was much stronger for adolescent reports than their parents', suggesting that it is the adolescent's perception of family functioning which impacts most on their well-being. Furthermore, gender differences were apparent, with a stronger correlation being observed between family functioning and psychopathology in females compared to males. This study, however, used a predominantly male sample from low socioeconomic backgrounds with lower than average academic achievement, thereby limiting the study's external validity. Furthermore, given that the study was based in China, where family structures and parenting practices are likely to be different to those in the UK, the study may have limited generalisability to the population of interest in the current study.

Shek (2002) again explored dimensions of eudaimonic well-being and life satisfaction in a later study using a larger sample of Chinese adolescents ($N = 1,519$). For this study, a previously unvalidated indigenous 33-item measure of family functioning was developed (the Chinese Family Assessment Instrument; Shek, 2002), and was found to have very high levels of internal consistency ($\alpha = .96$). The Chinese Family Assessment Instrument is comprised of 33 items across five subscales, measuring: 1) mutuality, 2) communication, 3) conflict, 4) parental control and 5) parental concern. The author, however, does not provide any information as to exactly what each scale is measuring. Example items from the scales are not provided in the text which makes it difficult for the reader to assess how the author defines and operationalises family functioning. Adolescent well-being was assessed in terms of existential well-being (Existential Well-Being Scale; Paloutzian and Ellison, 1982), life satisfaction (Life Satisfaction Scale; Diener, Emmons, Larson and Griffin, 1985); self-esteem (Self-Esteem Scale; Rosenberg, 1985) and psychiatric morbidity. Furthermore, single item measures were used to assess academic performance, substance misuse, and delinquent behaviour. As in the previous study, the results

indicated that adolescents who reported healthier levels of family functioning scored lower on measures of psychopathology (i.e. symptoms of mental illness, delinquent behaviour, and substance misuse) and higher on measures of well-being (i.e. existential well-being and life satisfaction). Further analyses revealed that the correlations between perceived family functioning and both psychopathology and positive indicators of well-being were significantly stronger for adolescents deemed to be economically disadvantaged compared to adolescents without economic disadvantage. Like many of the existing studies examining family functioning and its relationship with adolescent adjustment, the cross-sectional nature of these studies meant that the directionality of the relationship could not be concluded. In the final study of the series, therefore, Shek (2005) employed a longitudinal design to further examine the nature of the relationship between perceived family functioning and well-being in a sample of 199 Chinese adolescents, using the same measures as in Shek (2002). The observed results were consistent with previous findings, in that healthier levels of family functioning were associated with lower scores on measures of psychopathology and higher scores on existential well-being and life satisfaction. Longitudinal analyses at one year follow-up revealed that family functioning at Time 1 significantly predicted psychopathology and well-being at Time 2. This relationship was found to be stronger for females than males, which is in line with the findings of Shek (1997). Again, these findings may have limited generalisability to the current study given the cultural difference of the sample and the study's use of indigenously developed measures of family functioning, which may reflect potential differences between China and the UK in terms of, for example, parenting practices, roles, beliefs and expectations within the family.

The association between family functioning and alternative strengths based indicators of eudaimonic well-being has also been explored. Preechawong et al. (2007), for example, used multiple regression to examine the association between family

functioning, self-esteem and resourceful coping using a convenience sample of 132 adolescents (aged 12-17 years) attending an asthma clinic in Thailand. To assess family functioning, adolescents completed a self-reported measure of general family functioning, the Family Adaptability, Partnership, Growth, Affection and Response Scale (APGAR; Austin and Huberty, 1989). Adolescents also completed self-reported measures of self-esteem (Self-Esteem Scale; Rosenberg, 1985) and coping (Children's Self-Control Rating Scale; Rohrbeck, Azar and Wagner, 1991). The results showed that family functioning significantly predicted levels of self-esteem and resourceful coping in adolescence, highlighting the possible role of the family in fostering psychological strengths in adolescence. Furthermore, Uruk, Sayger and Cogdal (2008) examined the association between two dimensions of family functioning (adaptability and cohesion), trauma symptoms and dimensions of psychological well-being (Ryff, 1989) in a sample of undergraduate students (N = 189; mean age = 23 years). A 20-item measure of family adaptability and cohesion was completed (the Family Adaptability and Cohesion Evaluation Scale; Olson, Portner, & Lavee, 1985), in addition to a self-reported measure of trauma symptoms (LA Symptom Checklist; King, King, Leskin, & Foy, 1995) and Ryff's Scales of Psychological Well-Being (Ryff, 1989). Hierarchical regression analyses revealed that, after controlling for demographic variables, family cohesion and adaptability significantly predicted levels of trauma symptoms and psychological well-being. The authors therefore conclude that families who show higher levels of adaptability and emotional bonding between family members are more likely to be psychologically well. Whilst both of these studies offer support for the role of the family in fostering more eudaimonic aspects of well-being, few advances are made with regards to which specific dimensions of family functioning are associated with well-being. By enhancing our understanding of this association, psychologists and other mental

health professionals will be better able to develop interventions incorporating active components to promote eudaimonic well-being.

Limitations of the Existing Literature

Whilst the literature outlined above provides evidence which supports the relationship between family functioning and positive indicators of adolescent well-being, literature in this area trails far behind that of adolescent psychopathology. Methodological and conceptual limitations are noted within the existing research on adolescent well-being, which are likely to have hindered the progression of research in this area.

Firstly, there is great variability in the way in which well-being is defined and subsequently measured. Most of the available literature examining well-being has focussed solely on life satisfaction in adolescents. Studies which have attempted to measure more eudaimonic components of well-being in adolescents (e.g. Shek, 1997; 2002; 2005) have focussed on existential well-being or purpose in life, using measures which were not designed or validated for use with young people. Furthermore, the appropriateness of measuring concepts such as purpose in life and existential well-being in children and adolescents is questionable (The Children's Society, 2013). Further research, therefore, is required using more appropriately defined concepts and age appropriate measures of well-being.

A further limitation to the existing literature is the way in which family functioning is conceptualised and measured. Researchers who claim to be examining family functioning often focus purely on one single dimension (e.g. interparental conflict or parenting style) from one family members' perspective. In order to understand which dimensions of family functioning are most strongly associated with positive indicators of mental health, studies need to employ more holistic measures of family functioning which consider the interactions of the whole family.

A majority of the existing research in this area has been conducted in China, using indigenous measures (Shek, 2002; 2005). The results, therefore, may have limited generalizability to the UK due to possible cultural differences between Chinese and UK populations. Some Chinese cultures, for example, embrace a collectivist approach, with parents placing a greater emphasis on obedience to authority, self-control and compliance, rather than fostering their child's autonomy and independence which is more typical of Western parenting styles (Lau-Clayton, 2011). Research suggests that in Chinese families, parenting styles tend to be more authoritarian than authoritative, which may lead to differences in Chinese adolescents' reports of family functioning (e.g. level of warmth or conflict) and well-being (e.g. autonomy and decision making) compared to their UK counterparts (Wu and Chao, 2005).

Finally, a vast majority of the existing evidence is based on correlational studies which (whilst suggesting that a relationship between family functioning and indicators of well-being may exist) means that directionality or the predictive validity of family functioning on adolescent well-being cannot be inferred. Furthermore, the correlational studies are unable to provide further detail on which aspects of family functioning are best able to predict adolescent well-being, which would have implications for clinical practice and intervention.

THE MEDIATING ROLE OF WELL-BEING

Whilst the relationship between the family environment and adolescent psychopathology is well established, few attempts have been made to explain this relationship or identify possible underlying and intervening mechanisms. As our understanding of risk factors for adolescent psychopathology has advanced, researchers have identified a need to shift the focus of research to the processes or mechanisms which underlie the relationship between family stressors and

psychopathology in order to help develop clearer theoretical models to explain this relationship (Fosco and Feinberg, 2014; Frosch and Mangelsdorf, 2001; Grant et al., 2006; Liem, Cavall and Lustig, 2010; Shelton and Harold, 2007).

Researchers in the field of positive psychology state that indicators of well-being are not only desirable outcomes in themselves, but also play an important role in other health outcomes, including psychopathology (Suldo and Huebner, 2004a). The existing literature suggests that psychological strengths, including aspects of hedonic and eudaimonic well-being, abate the development of psychopathology or problem behaviour in the face of adverse life events, thereby acting as a buffer. Indeed, much of the research with adolescents thus far has centred on the moderating role of psychological strengths and positive indicators of well-being (e.g. life satisfaction, positive coping styles and problem solving skills) on the association between family dysfunction and psychopathology in adolescents (Park, 2004; Rogers and Holmbeck, 1997; Shelton and Harold, 2007; Suldo and Huebner, 2004a).

Researchers, however, have reported that more attention needs to be paid towards identifying the underlying pathways or mediating processes involved in the relationship between family stressors and adolescent psychopathology (Grant, Compas, Thurm, McMahon and Gipson, 2004; Grant et al., 2006; Shelton and Harold, 2007). Mediation models are particularly useful in psychological research as they not only enhance our theoretical understanding of how two variables come to be related, but also enable researchers to understand the underlying processes related to the development of mental health difficulties. This, therefore, has important clinical implications in terms of intervention design. Researchers argue that in enhancing our understanding of these mediating processes in the development of adolescent psychopathology, psychologists will be provided with additional pathways in which to reduce distress (Grant et al., 2006; Shelton and Harold, 2007). Despite this

acknowledgement, review papers in the field of adolescent psychopathology have indicated a lack of progress in this area (Grant et al., 2006). Furthermore, where these processes have been investigated in the link between family stressors and psychopathology, researchers have failed to place their investigation within a theoretical context (Grant et al., 2004).

As highlighted above, there is a well-established relationship between the family environment and adolescent psychopathology. Following the positive psychology movement, researchers have also begun to explore correlates of adolescent well-being, including aspects of family functioning. It is possible that these two strands of research may be related, with adolescent well-being acting as a plausible mediator in the relationship between the family environment and adolescent psychopathology. The current study is therefore interested in whether family functioning could achieve its effects on adolescent psychopathology via its impact on adolescent well-being.

The Mediating Role of Hedonic Aspects of Well-Being

As above, much of the existing research on mediating mechanisms involving well-being in adolescents has focussed on the mediating role of life satisfaction. The evidence base in relation to family functioning is limited, however, with a majority of the existing research focusing on family stressors, rather than functioning within the family. McKnight, Huebner and Suldo (2002) first explored life satisfaction as a mediating process between stressful life events (including family life events) and adolescent psychopathology. Students aged 11-18 years (N = 1,201) completed measures of life satisfaction, problem behaviour, personality, and stressful life events. Correlational analyses showed a significant positive relationship between stressful family events and students' levels of internalising and externalising symptoms. Further regression analyses revealed that life satisfaction mediated the relationship between stressful family events and both internalising behaviours and externalising

behaviours. More specifically, the results revealed that students reporting fewer stressful family related life events had higher levels of life satisfaction, which subsequently predicted fewer internalising and externalising behaviours.

Using data from the above sample, Suldo and Huebner (2004b) later examined the relationship between authoritative parenting, life satisfaction and psychopathology. The results indicated that, as before, levels of authoritative parenting were negatively correlated with internalising and externalising behaviours. Further analyses revealed that life satisfaction mediated the relationship between authoritative parenting and psychopathology. The authors concluded that authoritative parenting achieved its effects on adolescent psychopathology via its influence on adolescent life satisfaction.

More recently, an unpublished study explored the mediating role of life satisfaction between family stressors (including interparental conflict) and substance use (an example of an externalising behaviour) in 183 students aged 11 to 14 (Chappel, 2011). Path analyses indicated that life satisfaction mediated the relationship between interparental conflict and substance misuse. It was concluded, therefore, that high levels of interparental conflict were related to lower levels of life satisfaction, which in turn predicted greater levels of substance use in adolescents.

The Mediating Role of Eudaimonic Aspects of Well-Being

The research findings examining the mediating role of aspects of eudaimonic well-being in the relationship between family functioning and psychopathology are limited and unclear. Tentative hypotheses may be drawn, however, from related research examining the mediating role of positive indicators related to eudaimonic well-being on the relationship between family stress or parenting styles and adolescent psychopathology.

In a recent piece of research, Hu and Ai (2014) investigated the mediating role of adolescent self-esteem (which shares similarities with Ryff's (1989) dimension of self-acceptance) in the link between the parent-adolescent relationship and symptoms of depression in adolescents aged 14-16 years (N = 370). Adolescents completed a nine-item measure of the quality of their relationship with their parents (Parent Adolescent Relationship Scale; Buchanan et al., 1991), alongside the Self-Esteem Scale (Rosenberg, 1985) and the Self-Rating Depression Scale (Zung, 1986), all of which had acceptable levels of reliability. The results revealed that adolescent reported self-esteem mediated the relationship between the parent-adolescent relationship and symptoms of depression. Again, this study was conducted in China, and hence caution should be applied when extending the findings to adolescents in the UK.

Whilst it is likely that the relationship between family functioning, psychopathology and its mediators are reciprocal in nature, advances have been made in the field using prospective research designs (Grant et al., 2004). For example, using a longitudinal design, Liem et al. (2010) investigated the impact of authoritative parenting on symptoms of depression in high school students (N = 1,325) whilst assessing the mediating role of self-development. Self-development was conceptualised as a developed sense of self-worth and personal agency, both of which share similarities with Ryff's (1989) dimensions of self-acceptance and autonomy. Self-worth and personal agency were measured using an abbreviated version of the Self-Esteem Scale (Rosenberg, 1985) and Pearlin's Mastery Scale (Pearlin, Lieberman, Menaghan and Mullen, 1981). In line with previous research, hierarchical regression analyses indicated that authoritative parenting at Time 1 was associated with fewer symptoms of depression during adolescence at Time 2 (two years later) and Time 3 (four years later). Further regression analyses revealed that personal agency at Time 2 fully mediated the relationship between authoritative

parenting at Time 1 and depressive symptoms at Time 3. Self-worth at Time 2 was also found to partially mediate the relationship between authoritative parenting at Time 1 and depressive symptoms at Time 3. This suggests that authoritative parenting assisted in the development of a positive sense of self-worth and personal agency in adolescents, which in turn reduced the risk of developing symptoms of depression during adolescence. Whilst the researchers attempted to model causation by employing a longitudinal design, the direction of causality cannot be assumed. The authors acknowledge that depressed adolescents may have had a more negative view of their parents' parenting styles which may account for the difference observed. Furthermore, the study is limited by the way in which the researchers assessed parenting styles, in that the researchers assumed that the parenting style of mothers and fathers in two parent families were consistent. The study, therefore, does not take in to account incongruent parenting styles, or other parenting behaviours which may influence adolescent development.

Of particular relevance to the current study, Robitschek and Kashubeck (1999) explicitly examined the relationship between family functioning and psychological distress in college students. The researchers investigated the mediating effect of resilience and personal growth (a dimension of Ryff's (1989) Scales of Psychological Well-Being). Participants (N = 294) completed self-reported measures of family functioning (the Family Relationship Index; Moos and Moos, 1986), personal growth (Ryff, 1989), resilience (the Dispositional Resilience Scale; Bartone, Ursano, Wright, and Ingraham 1989) and symptoms of depression (Center for Epidemiological Studies Depression Scale; Radloff, 1997). Structural equation modelling revealed that resilience partially mediated the relationship between family functioning and internalising behaviours. Furthermore, personal growth orientation was found to fully mediate this relationship. The results, therefore, offer support for the potential mediating effects of aspects of eudaimonic well-being in the relationship between

family functioning and psychopathology. Given the average age of the participants (19.2 years), however, caution should be applied in generalising the results to adolescents.

Limitations of the Existing Literature

Of the available literature examining the mediating role of well-being on the relationship between family functioning and psychopathology in adolescence, researchers have chosen to focus either on hedonic approaches to well-being, or more eudaimonic approaches, rather than considering well-being as a combination of the two, as more recent conceptualisations suggest (Keyes, 2005). Furthermore, a majority of the research has focussed on the positive indicators of life satisfaction and self-esteem. As a result, less is known about the potential mediating effects of other psychological strengths, such as those encompassed within social, emotional and psychological aspects of well-being (NICE, 2012).

As with the literature reviewed earlier, researchers examining mediating factors in the relationship between family functioning and psychopathology continue to define and measure family functioning along single dimensions, such as parental conflict or parenting styles, rather than considering the impact of and interactions between the whole family.

Further research in this area is therefore necessary in order to provide psychologists with information on additional pathways for promoting well-being and reducing distress in adolescents. By gaining further insight into the possible mediating mechanisms underlying this relationship, psychologists will have a greater understanding as to how these constructs are related, and will be in a better position to refine existing programmes or develop new programmes for prevention and early intervention of adolescent psychopathology by building upon active components

which appear more helpful in breaking this chain. The hypothesised role of well-being as a mediator in the relationship between family functioning and adolescent psychopathology may open up new possibilities in terms of intervention for those adolescents who may experience poorer levels of family functioning.

THE CURRENT STUDY

Aims and Purpose

The current study aimed to build upon the existing research examining adolescents' perspectives of family functioning and how this relates to adolescent mental health. As discussed above, the existing research has been limited by conceptual issues, particularly with researchers defining and measuring adolescent mental health as purely the absence of mental illness. The current study addressed this issue by defining mental health in fuller terms, in line with current definitions of well-being for children and adolescents. This definition included the presence of both hedonic and eudaimonic aspects of well-being, across social, emotional and psychological domains, and was reflected in the measures chosen to assess adolescent well-being. Previous research has also been limited by measuring family functioning using single items, single constructs or single dimensions of functioning (e.g. parent-adolescent conflict). The current study aimed to overcome these methodological issues by assessing family functioning using a validated, multidimensional measure of family functioning, which takes in to account the adolescents' perceptions of their whole family, rather than focusing simply on dyadic processes.

The second aim of the present study was to build upon and expand the existing literature on the mechanisms which underlie the link between family functioning and adolescent psychopathology by examining the potential mediating role of well-being. As stated above, much of the existing research has focussed on factors which moderate or buffer the relationship between family stressors and adolescent

adjustment. The current study, however, was interested in the potential mediating role of hedonic and eudaimonic aspects of well-being in the relationship between family functioning and adolescent psychopathology, which has not previously been examined.

Hypotheses and Research Questions

Hypothesis 1: Adolescents who report poorer levels of family functioning will report lower levels of life satisfaction and psychological well-being.

Research Question 1: Which aspects of family functioning are most strongly associated with adolescent life satisfaction and psychological well-being?

Hypothesis 2: Adolescent reported life satisfaction and psychological well-being will mediate the relationship between family functioning and externalising behaviours.

Hypothesis 3: Adolescent reported life satisfaction and psychological well-being will mediate the relationship between family functioning and internalising behaviours.

CHAPTER 2: METHOD

DESIGN

The current study employed a cross-sectional design using data collected from adolescents in school settings. All adolescents were asked to complete the same set of questionnaires. The study was primarily interested in the relationship between family functioning, life satisfaction and general psychological well-being, and hence was correlational in nature. The study also examined the potential mediating role of well-being in the relationship between family functioning and psychopathology, whereby family functioning was the independent variable (IV), internalising and externalising behaviours were the dependent variables (DV) and life satisfaction and general psychological well-being were the mediator variables (MV).

PARTICIPANTS

Adolescents were opportunistically sampled from two comprehensive schools in Surrey. Participation was based on the availability of form groups as per the school timetable, along with agreement from their tutors. Adolescents were invited to participate in the study if they were aged between 13 and 16 years-old, were fluent in English and had a sufficient reading level to complete the questionnaires. In line with previous studies of this kind, no further inclusion criteria were applied (Chappel et al., 2014; Delgado, 2011).

A total of 117 participants consented to take part in the study. The sample was comprised of 62 males and 55 females, with a mean age of 14.5 years ($SD = .78$). Table 1 provides an overview of the number of male and female participants by school, along with their ages.

Table 1

Gender and age of participants from School A and School B

School	Male	Female	Total	Mean Age (years)	Age Range (years)
School A	25	19	44	13.8	13.0 – 14.8
School B	37	36	73	15.0	14.2 – 16.2
Total	62	55	117	14.5	13.0 – 16.2

In order to estimate the required sample size, an a priori power analysis was conducted based on multiple regression. Chappel (2011) used multiple regression to explore the association between familial stress on life satisfaction and substance misuse in a non-clinical sample of American adolescents, using similar measures and analyses to those in the current study. Based on a large effect size (i.e. $f^2 = .35$; Chappel, 2011), the a priori power analysis indicated that a minimum of 36 participants was required to achieve power of .80, where $\alpha = .05$. Following data collection, a post-hoc power analysis (based on multiple regression; $f^2 = .30$) indicated that the current study was adequately powered for this analysis ($B = .99$).

MEASURES

The current study used five measures, including: the Systemic and Clinical Outcome and Routine Evaluation Scale (Stratton et al., 2010) to measure family functioning; the Multidimensional Students' Life Satisfaction Scale (Huebner, 1994) to measure life satisfaction; the Warwick-Edinburgh Mental Well-Being Scale (Tennant et al., 2007) to measure general psychological well-being (including eudaimonic aspects of well-being); the Strengths and Difficulties Questionnaire (Goodman, 1997) to measure psychopathology, and a demographics questionnaire developed in house. Table 2 provides an overview of each measure.

Table 2

Measures used to examine each construct in the current study

Construct	Measure	Subscales
Family Functioning	SCORE-15	Strengths and Adaptability; Disrupted Communication; Overwhelmed by Difficulties.
Life Satisfaction	MSLSS	Satisfaction with: Friends, School, Family, Living Environment and Self.
Psychological Well-Being	WEMWBS	N/A
Psychopathology	SDQ	Externalising Behaviours (Hyperactivity and Inattention, and Conduct Problems) ; Internalising Behaviours (Peer Problems and Emotional Difficulties)

Note: SCORE-15 = Systemic Clinical Outcomes and Routine Evaluation Scale; MSLSS = Multidimensional Students' Life Satisfaction Scale; WEMWBS = Warwick-Edinburgh Mental Well-Being Scale; SDQ = Strengths and Difficulties Questionnaire.

Demographics Questionnaire

Basic demographic information was collected from participants, including: age, gender, ethnicity, parental education and occupation, and previous input from mental health services (see Appendix B). Given their known negative impact on adolescent well-being (Ash and Huebner, 2001; Chappel et al., 2014), information was also collected on whether the participants had experienced any significant life events over the previous 12 months. Specific items were included (adapted from the Life Events Record; Coddington, 1972) to capture this information, including whether the

adolescent had: experienced the separation or divorce of parents or carers; experienced the death of a family member or friend; moved house; moved school; been seriously unwell, or had a parent, carer or sibling who had been seriously unwell.

The Systemic Clinical Outcome and Routine Evaluation (SCORE-15)

The SCORE-15 was used as a measure of family functioning in the current study (see Appendix C). The SCORE-15 is a 15-item self-report questionnaire designed to assess family functioning across three domains: 1) strengths and adaptability, 2) disrupted communication and 3) overwhelmed by difficulties (see Table 3 for subscale items). The SCORE-15 can be administered to any member of the family aged 11 years and above.

Respondents are required to rate different statements of familial interactions and affect, with regards to how well each statement describes the respondent's family. Respondents mark their answers on a five-point scale (1 = *describes us very well*, 2 = *describes us well*, 3 = *describes us partly*, 4 = *describes us not well*, and 5 = *describes us not at all*). The potential range of scores for the SCORE-15 is between 15 and 75, with lower scores indicating healthier family functioning. Clinical cut off points are not yet available for the UK population, although norms for a non-clinical Irish sample have been developed (Fay et al., 2013). Fay et al., (2013) established 90th percentile points in a sample of adolescents (N = 132), with their results suggesting that adolescents who scored above 2.9 when the total score had been averaged across the 15 items were likely to live in families where there is a clinically significant level of family functioning.

Table 3

Items relating to each subscale of the SCORE-15

SCORE-15 Subscale	Items
Strengths and Adaptability	<i>We are good at finding new ways to deal with things that are difficult; in my family we talk to each other about things that matter to us; when one of us gets upset we get looked after within the family; each of us gets listened to in the family; we trust each other.</i>
Overwhelmed by Difficulties	<i>We seem to go from one crisis to another in my family; things always seem to go wrong for my family; in my family we blame each other when things go wrong; we find it hard to deal with everyday problems; it feels miserable in my family.</i>
Disrupted Communication	<i>It feels risky to disagree in my family; people often don't tell each other the truth in my family; people in my family interfere too much with each other's lives; people in my family are nasty to each other; when people in my family are angry they ignore each other on purpose.</i>

Stratton et al. (2013) validated the SCORE-15 with a sample of participants from the UK (N = 584), including children aged 11-years and above. The measure was found to have respectable levels of internal reliability ($\alpha = .89$), and qualitative feedback implied that it was acceptable for use by adolescents.

This measure was chosen over other measures of family functioning given that it is relatively short multidimensional measure, yet has respectable psychometric properties. The SCORE-15 is also commonly used in clinical practice and has been

translated internationally for use across different cultures. Importantly, the SCORE-15 has been found to be non-threatening for use with adolescents, and hence was deemed more suitable for use with the current sample than other available measures of family functioning.

The Multidimensional Student's Life Satisfaction Scale (MSLSS)

The MSLSS was used as a measure of life satisfaction in the current study (see Appendix D). The MSLSS is a self-report measure of life satisfaction, which is thought to represent the cognitive component of subjective well-being (Chappell et al., 2014; Huebner, 1994). The MSLSS is comprised of 40 items, forming five subscales, including satisfaction with: 1) friends, 2) school, 3) family, 4) living environment, and 5) self.

Respondents are required to rate their level of agreement with each item on a six-point scale (1 = *strongly disagree*, 2 = *moderately disagree*, 3 = *mildly disagree*, 4 = *mildly agree*, 5 = *moderately agree*, and 6 = *strongly agree*). Scores on each subscale can be totalled to generate a score for overall life satisfaction. Scores can range from 40-240, with higher scores indicating higher levels of life satisfaction.

The MSLSS is one of the most widely used measures of life satisfaction in research with children and adolescents (Gallini, 2007). Gilman et al. (2008) report a large scale international study whereby the measure was validated in a sample of students (N = 1,338; mean age = 14.8 years). The results indicated that the measure had acceptable levels of internal consistency for research purposes ($\alpha = .89$), and support was found for its five factor structure. The MSLSS' strong psychometric properties lead to it being chosen for use in the current study over other measures of life satisfaction. There is no evidence, however, to suggest that the MSLSS has been

validated specifically with adolescents in the UK. It was necessary therefore to run reliability analyses for the sample of the current study.

The Warwick-Edinburgh Mental Well-Being Scale (WEMWBS)

The WEMWBS is a self-report measure of mental well-being, comprising 14-items which are positively phrased (see Appendix E). The WEMWBS includes items assessing aspects of eudaimonic well-being, including the individual's ability to build and maintain positive social relationships, a sense of autonomy, self-acceptance and personal growth (Clarke et al., 2011; Tennant et al., 2007). The WEMWBS assesses well-being across social, emotional and psychological domains, in line with adolescent-appropriate definitions of well-being (NICE, 2012). For simplicity, the current study refers to the WEMWBS as a measure of general psychological well-being (not to be confused with Ryff's (1989) Scales of Psychological Well-Being).

On the WEMWBS, respondents are required to rate how often they have been feeling a particular way (e.g. *I've been able to make my own mind up about things*) over the past two weeks. Respondents indicate their answers on a five-point scale (1 = *none of the time*, 2 = *rarely*, 3 = *some of the time*, 4 = *often*, and 5 = *all of the time*). Scores can range from 14-70, with higher scores indicating higher levels of well-being. A clinically significant cut-off point at 43.5 has been suggested (Bianco, 2012).

Whilst the WEMWBS was initially developed for use with adults, the measure has been validated for use with adolescents. Clarke et al. (2011) administered the WEMWBS to a sample of secondary school students (N = 1,650) aged 13-years and above in the UK. The measure was found to have acceptable levels of internal consistency ($\alpha = .87$). A focus group with adolescents (N = 80) also revealed that the scale demonstrated face validity and was acceptable to those completing it (Clarke et al., 2011).

This measure was selected over other measures of well-being as it most closely operationalised well-being, defined in relation to children and adolescents (NICE, 2012), whilst including relevant items which could be related to eudaimonic well-being. The measure is also relatively short, and is used widely in clinical settings with adolescents (CORC, 2014).

The Strengths and Difficulties Questionnaire – Self-Report Version (SDQ)

The SDQ was used as a measure of psychopathology, specifically internalising and externalising behaviours, in the current study (see Appendix F). The SDQ is a 25-item screening questionnaire for emotional and behavioural difficulties in children aged four to 17 years (Goodman, Meltzer and Bailey, 1998). The questionnaire can be administered to parents, teachers and children aged 11 years and above. The 25-items of the SDQ form five subscales, each with five items, including: 1) emotional difficulties, 2) conduct problems, 3) hyperactivity and inattention, 4) peer problems and 5) pro-social behaviour.

Respondents are required to rate their level of agreement with certain behaviours and feelings using a three-point scale (1 = *not true*, 2 = *somewhat true*, 3 = *certainly true*). Scores from all the subscales (except pro-social behaviour) are then summed to generate a total difficulties score. For the self-report version of the SDQ, the total difficulties score can range from 0 to 40, with scores above 20 indicating a risk of developing clinically significant problems.

The SDQ is widely used in clinical research with children and adolescents, and results from international studies indicate good inter-informant reliability and internal consistency (Curvis, McNulty and Qualter, 2013; Goodman, 2001). Goodman (2001) validated the self-report version of the SDQ in a sample of British adolescents (N = 10,438), with the results indicating acceptable levels of reliability ($\alpha = .80$), as well as

supporting the five factor structure. Studies have also shown that the SDQ correlates highly with other screening questionnaires for internalising and externalising problems, including the Child Behaviour Checklist and the Rutter Questionnaires (Goodman, 2001). The SDQ was chosen for use in the current study given its wide use with adolescents, both clinically and in research, and its strong psychometric properties.

The SDQ can also be divided into subscales for externalising behaviours and internalising behaviours, which is recommended when used with non-clinical populations (Goodman, Lamping and Ploubidis, 2010). The reliability and validity of the Externalising and Internalising subscales of the SDQ has been examined using a large sample of adolescents ($N = 7,678$) in the UK. The results demonstrated construct validity for both scales, and acceptable levels of reliability (internalising subscale $\alpha = .73$; externalising subscale $\alpha = .78$). Given that the current study used a non-clinical sample, and that much of the literature outlined above has spoken about psychopathology in terms of internalising and externalising behaviours, the current study used the Externalising and Internalising subscales to enable comparisons to be drawn between the current research and previous research.

PILOTING AND SERVICE USER FEEDBACK

Schools were unavailable for piloting the measures, and hence a brief pilot was conducted with adolescents purposively sampled by the Researcher. The aims of the pilot were: a) to ensure that information given about the project was sufficiently clear; b) to ensure that the instructions for completing the questionnaires were clear; c) to ascertain whether any of the questionnaire items were unclear or difficult to answer; d) to establish a realistic completion time of the measures, and e) to get a general sense of the psychological impact of completing the questionnaires.

Five adolescents participated in the pilot: two aged 13 years; two aged 15 years, and one aged 16 years. The complete battery of questionnaires was completed in between 21 and 30 minutes. Allowing an extra ten minutes for introductions, questions and debriefing, it was concluded that the length of time required to participate in the study could be easily accommodated within one period of a typical school schedule.

Feedback was sought from the adolescents after completing the questionnaires. They reported that the background information and consent forms were sufficiently clear. Instructions for completing the questionnaires were also found to be sufficiently clear. One individual commented that it would be easier if all questionnaires followed the same scale, however, this could not be amended. Following feedback from the adolescents, the information sheets and consent forms were reformatted and colourful images were included to make them more inviting to read.

Participants completed all items of the questionnaires, and whilst the questionnaires were described as being “a bit personal”, participants felt able to answer each item. Participants did not report any adverse consequences as a result of completing the questionnaires.

PROCEDURE

Two weeks prior to entering the schools for data collection, parental information sheets and consent forms were sent home to parents of participating classes (see Appendix G). Parents were advised to complete and return the consent form should they not want their child to participate in the project.

Information sheets were also distributed to the adolescents via their tutor. The information sheets outlined the purpose of the study and what participation would involve (see Appendix H). Information was also provided on how data would be

stored and used. Confidentiality and anonymity was described, along with the limits of this. The adolescents were informed that should the Researcher have concerns regarding their well-being (based on their answers) then this would be discussed with their teacher and possibly their parents. The adolescents were also informed that they could withdraw their data from the study at any time, without having to give a reason. The Researcher's contact details were included on the information sheet should the adolescents have any questions about the project. Information sheets were also supplemented with posters for the tutors of participating form groups to display in the classroom (see Appendix I).

The Researcher attended each participating form group for data collection. Adolescents whose parents had opted-out of the research were identified by their teacher, and were given an alternative piece of work. Questionnaire packs were handed out to each participating adolescent, including information sheets, consent forms (see Appendix J) and the five questionnaires. Whilst participants completed the same measures, the order in which the questionnaires were presented in the packs was counterbalanced within each class to eliminate any potential order effects and discourage participants from working together. The order in which the questionnaires were completed was therefore different for each participant. Each pack was marked with a unique identification number which could be linked with the participants' name should any concerns arise about their well-being.

The Researcher verbally re-introduced the project and again outlined its purpose, along with the adolescents' right to confidentiality and the limits of this. Rights to anonymity were also explained, and the adolescents were reminded that they could stop or withdraw from the study at any time. Participating adolescents were given the opportunity to ask any questions they had about the project or the questionnaires. Finally, participating adolescents were instructed to complete the questionnaires

under exam conditions to ensure that their answers remained confidential. The Researcher remained in the classroom to answer any questions that arose whilst the questionnaires were being completed.

Upon completion of the questionnaires, the Researcher again explained the purpose of the research to participating adolescents. The adolescents were also reminded of how their data would be used and were re-informed of their right to withdraw from the project. The adolescents were given the opportunity to ask further questions and were invited to contact the Researcher at any point either in person or via the email address provided on the information sheet should they have any questions or concerns. The adolescents were advised to speak to their teacher or the Researcher if they were feeling distressed as a result of completing the questionnaires.

All completed questionnaires were scored at the schools on the day of completion to ensure timely feedback to the tutors should any of the adolescents' answers raise concerns regarding their well-being.

ETHICS

Ethical approval was sought from the Royal Holloway University of London Psychology Departmental Ethics committee and approval was granted in February 2014 (see Appendix K for email confirmation). Approval was also granted by the Head Teacher and Special Educational Needs Co-ordinator (SENCo) of School A and School B.

Ethical Issues Encountered During the Study

Eighteen adolescents were found to be at risk of having clinically significant difficulties, as identified by elevated scores on the SDQ. The Researcher subsequently liaised with the project supervisor, the adolescents' tutors and the

schools' SENCo, and agreed an action plan for each adolescent. The names of these adolescents were passed on to the schools' SENCo and Head Teacher, along with a brief overview of the concerns as indicated by their scores on the SDQ. In cases where the schools were not already aware of the adolescents' difficulties, and systems of support were not already in place, a letter was sent home to the adolescents' parents. This was done following the procedure agreed with the schools and outlined in the information about the study which was provided to both parents and pupils. The letter informed parents that their child's scores may be indicative of distress, and were invited to discuss this with the school or their child's general practitioner (see Appendix L for an example letter).

CHAPTER 3: RESULTS

ANALYSIS STRATEGY

The data were analysed using the Statistical Package for Social Sciences (SPSS Version 21). The SPSS database was screened for accuracy and missing items, and assumptions of normality were checked for continuous variables. Preliminary analyses were then conducted to examine the influence of covariates, and determine the need to control for these in subsequent analyses. The results in relation to the study's main hypotheses were analysed using correlation and regression analyses, details of which are further provided below.

Data Screening

As recommended by Tabachnick and Fidell (2013) the SPSS database was checked for errors and missing data. Cases with more than 5% of data missing for a single measure were excluded from the analyses ($N = 5$), leaving a final data set for 112 participants. Missing data were replaced with mean values in cases where this accounted for less than 5% of a single measure.

The distributions for each variable were checked for skewness and kurtosis. All met assumptions of normality ($z < 2.58$) except the Peer Problems and Conduct Problems subscales of the SDQ (which form part of the Internalising and Externalising scales respectively), both of which were significantly positively skewed ($z = 3.11$ and $z = 4.55$). Data for these two subscales were subsequently checked for outliers (i.e. scores which were more than three standard deviations from the mean) of which none were found. Square root transformations were subsequently applied which successfully normalised the distributions. After performing the necessary transformations, the data met assumptions for normality and parametric analyses.

Descriptive Statistics

The descriptive statistics for each variable used in the study are outlined in Table 4. Whilst normative data or well established clinical cut-off points are not available for the SCORE-15, MSLSS or WEMWBS, conclusions can be drawn about the general levels of family functioning and well-being of the current sample by examining the mean response to items on each measure.

Table 4

Means and standard deviations (SD) for each outcome variable (N = 112)

Variable	Total Scale <i>M</i> (SD)	Item Response <i>M</i>
Family Functioning (SCORE-15)	32.0 (9.2)	2.1
Life Satisfaction (MSLSS)	178.7 (23.2)	4.5
Psychological Well-Being (WEMWBS)	48.5 (8.6)	3.5
Externalising Behaviours (SDQ)	6.9 (3.5)	-
<i>Hyperactivity</i>	4.6 (2.3)	-
<i>Conduct Problems</i>	2.3 (1.8)	-
Internalising Behaviours (SDQ)	5.7 (3.5)	-
<i>Emotional Problems</i>	3.4 (2.4)	-
<i>Peer Problems</i>	2.3 (1.9)	-
Total Difficulties (SDQ)	12.3 (5.9)	

The mean score for each item on the SCORE-15 was 2.1, which is lower than the proposed cut-off (2.9) for clinically significant levels of family functioning based on normative data (Fay et al., 2013). This suggests that the current sample of adolescents generally reported healthy levels of family functioning.

In terms of adolescent life satisfaction, the mean response to items on the MSLSS was 4.5 out of a possible 6 (where 1 = *strongly disagree*, and 6 = *strongly agree*) suggesting that the current sample of adolescents were *mildly* to *moderately* satisfied with various aspects of their life.

The mean score on the WEMWBS suggested that adolescents in the current sample generally reported healthy levels of psychological well-being. Each item on this positively phrased measure asked adolescents to rate how often they had been feeling a particular way, for example, *I have been feeling optimistic about the future*. The mean response to items on the measure was 3.5 out of a possible 5 (where 1 = *none of the time* and 5 = *all of the time*), suggesting that the current sample of adolescents, on average, had been feeling psychologically well *some of the time* to *often*.

Unlike the measures discussed above, clinical cut-off points are available for the subscales of the self-report SDQ, which are: 7/10 for Hyperactivity and Inattention; 5/10 for Conduct Problems; 7/10 for Emotional Difficulties and 6/10 for Peer Problems (Youth in Mind, 2013). With reference to these clinical cut-off points, the mean scores in the current study suggest that adolescents were generally scoring within the non-clinical range across all subscales. Sixteen percent of the total sample of adolescents (N = 18), however, were at risk of clinically significant levels of difficulty based on their total difficulties score. This is higher than would be expected compared to validation studies using the SDQ with non-clinical populations, where 5% of the sample scored within the 'at risk' range (Goodman, Meltzer and Bailey, 1998).

SAMPLE CHARACTERISTICS

Age, Gender and Ethnicity

The mean age of adolescents included in the sample was 14.5 years ($SD = 0.8$), with ages ranging between 13.0 and 16.2 years. The sample was relatively even in terms of the number of males and females included, with 52% of the total sample identifying as male.

A majority of the total sample (66%) described their ethnicity as White British. Nine percent of the sample described their ethnic origin as Asian (Bangladeshi, Indian or Pakistani) and a small minority identified as Black (3%). Appendix M illustrates a further breakdown of the ethnicity of adolescents included in the final sample

Despite the majority of adolescents identifying as White British, adolescents from black and minority ethnic groups may have been over represented in the current sample. Data on population estimates from the Office for National Statistics (2011) reported that 83% of the total UK population were of White British backgrounds, compared to 66% in the current sample.

Parental Education and Occupation

A significant proportion of adolescents (30%) were unable to comment on their parents' highest level of education. Of the adolescents who were able to provide this information, almost half ($N = 37$) reported that their parents had completed university, either at undergraduate or postgraduate level. Appendix M illustrates a further breakdown of adolescents by parental level of education.

Parental occupation was categorised following guidelines from the Office for National Statistics (ONS, 2010) to give an indication of adolescents' socioeconomic status. A vast majority of adolescents who were able to provide this information ($N = 102$) reported that at least one of their parents was employed (92%). The most frequently

reported parental occupations fell within the Lower Professional/Management, the Lower Technical and the Semi-Routine categories. Appendix M illustrates a further breakdown of the sample by parental occupation.

Employment data provided by the Office for National Statistics (ONS, 2014) suggests that fewer parents of adolescents in the current study occupied management or professional positions (27%) compared to the national average (43%), whilst more parents occupied lower technical or routine positions (40%) compared to the national average (30%). This suggests that the adolescents included in the current study perhaps came from more middle to lower socioeconomic backgrounds compared to the general UK population.

Mental Health Status and Significant Life Events

A majority of the adolescents (83%) reported that they had never accessed mental health services. Thirteen percent of the sample reported that they had, either currently or previously, received a diagnosis of a mental health condition. This is slightly higher than estimates based on epidemiological research, which reports that one in ten children and adolescents suffer from a diagnosable mental health condition (ONS, 2012). Appendix M illustrates a further breakdown of the sample for involvement of mental health services.

Adolescents' experience of recent significant life events was examined given that previous research has suggested that this impacts on adolescent well-being and psychopathology (Chappel et al., 2014; Tram and Cole, 2000). A majority of the sample (N = 66) reported that they had not experienced any significant life events in the past 12 months. Of those who reported they had experienced a significant life event, the most commonly reported was the death of a family member or friend (N = 20), having moved house (N = 17), and having a parent or sibling who had been

seriously ill ($N = 12$). For the purpose of further analysis, the categories were collapsed into adolescents who had experienced a significant life event in the past 12 months (41%) and those who had not (59%). Appendix M illustrates a further breakdown of the reporting of significant life events in the past 12 months.

INTERNAL RELIABILITY AND VALIDITY

A review of the literature failed to identify any studies that had previously used the life satisfaction measure (the MSLSS) with a sample of adolescents in the UK, therefore internal consistency was calculated for the current sample to ensure reliability. Based on the recognition that a Chronbach's alpha of greater than .70 is indicative of adequate internal consistency (Barker and Pistrang, 2002) the results showed that the MSLSS had adequate internal reliability in the current study (Chronbach's $\alpha = .91$). Correlations between the MSLSS with other psychometrically sound measures used in the current study may also suggest evidence of convergent and discriminative validity.

The internal consistency of the SCORE-15 was also calculated to examine how it performed in the current sample. The results revealed that the SCORE-15 had adequate levels of internal consistency in the current study ($\alpha = .85$), as did each of its subscales (Strengths and Adaptability, $\alpha = .77$; Overwhelmed by Difficulties, $\alpha = .75$; Disrupted Communication, $\alpha = .73$).

PRELIMINARY ANALYSES

Relationship between Demographics and Outcome Variables

In order to establish whether demographic variables were significantly related to family functioning, well-being or psychopathology, preliminary analyses were run to determine the need to control for these demographic variables in later analyses.

Correlation analyses indicated that age was significantly negatively correlated with internalising behaviours only ($r(112) = -.20, p = .035$). This suggests that as the age of the adolescents in the sample increased, the level of internalising behaviours decreased. See Appendix N for correlation coefficients between these variables.

Independent samples t-tests with Bonferroni corrections (to control for Type I errors) indicated that there was a significant difference between males and females in levels of internalising behaviours only, with females displaying significantly higher levels of internalising behaviours compared to males ($t(110) = -4.83, p < .001$). All other results were not significant ($p = ns$; see Appendix N for full results).

A one-way ANOVA revealed that there were no significant differences on measures of family functioning, well-being or psychopathology between different levels of SES ($p = ns$; see Appendix N for full results).

Independent samples t-tests with Bonferroni corrections showed that adolescents who had experienced a significant life event in the past 12 months reported significantly higher levels of internalising behaviours compared to adolescents who had not experienced a significant life event ($t(105) = 2.91, p = .004$). All other results were not significant ($p = ns$; see Appendix N for full results).

In summary, differences in age, gender, SES and the experience of significant life events did not appear to influence levels of adolescent reported life satisfaction or psychological well-being. Demographic variables, therefore, did not need to be controlled for in the subsequent main analyses of life satisfaction and psychological well-being.

Relationships between Outcome Variables

Correlation analyses were initially conducted between each of the outcome variables to check for levels of relatedness (see Table 5 for correlation coefficients). The

results indicated that each of the outcome variables were significantly related to one another, with varying degrees of strength. The results were as expected based on previous research, which has found moderate positive correlations between indicators of psychological well-being and measures of life satisfaction (Clark et al., 2011) and moderate negative correlations between positive indicators of well-being and measures of psychopathology (Stewart-Brown and Janmohamed, 2008).

Table 5

Correlation coefficients between outcome variables

		MSLSS	WEMWBS	SDQ: EXT	SDQ: INT
MSLSS	Pearson's <i>r</i>	-			
	Sig (2-tailed)	-			
WEMWBS	Pearson's <i>r</i>	.57***	-		
	Sig (2-tailed)	.000	-		
SDQ: EXT	Pearson's <i>r</i>	-.34**	-.27***	-	
	Sig (2-tailed)	.002	.000	-	
SDQ: INT	Pearson's <i>r</i>	-.29***	-.45**	.31**	-
	Sig (2-tailed)	.000	.004	.001	-

Note: MSLSS = life satisfaction; WEMWBS = general psychological well-being; SDQ: EXT = externalising behaviours; SDQ: INT = internalising behaviours.

** $p < .01$ *** $p < .001$

Relationship between Family Functioning and Psychopathology

Supplementary Pearson's correlation analyses were conducted between family functioning and externalising and internalising behaviours in adolescents to check that the relationships between these variables in the current sample were as expected based on existing research. Following the preliminary analyses, a partial

correlation was conducted for the relationship between family functioning and internalising behaviours, controlling for the earlier identified effects of age, gender and significant life events on internalising behaviours. These results showed a significant correlation between family functioning and internalising behaviours, whereby poorer levels of family functioning were associated with higher levels of internalising behaviours ($r(112) = .44, p < .001$). There was also a significant correlation between family functioning and externalising behaviours, with poorer levels of family functioning associated with higher levels of externalising behaviours ($r(112) = .33, p < .001$).

MAIN ANALYSES

Hypothesis 1

Adolescents who report poorer levels of family functioning will report lower levels of life satisfaction and psychological well-being.

This hypothesis was tested using Pearson's correlations between the total scores on the SCORE-15 (measure of family functioning), the total scores on the MSLSS (measure of life satisfaction) and total scores on the WEMWBS (measure of general psychological well-being).

The results revealed a significant negative correlation between scores on the SCORE-15 and the MSLSS, with poorer levels of family functioning related to lower levels of life satisfaction ($r(112) = -.54, p < .001$). There was also a significant negative correlation between scores on the SCORE-15 and the WEMWBS, with poorer levels of family functioning being related to lower levels of psychological well-being ($r(112) = -.45, p < .001$). The results, therefore, support Hypothesis 1.

Research Question 1

Which aspects of family functioning are most strongly associated with adolescent life satisfaction and psychological well-being?

This research question was examined using multiple regression analyses, with total scores on the MSLSS (measure of life satisfaction) and the WEMWBS (measure of general psychological well-being) being entered as dependent variables, and the three subscales of family functioning on the SCORE-15 (Strengths and Adaptability, Disrupted Communication and Overwhelmed by Difficulties; see Table 3, p. 47 for subscale items) being entered as predictor variables to examine the unique contribution of each dimension of family functioning.

The results revealed that overall family functioning accounted for a significant amount of the variance in life satisfaction ($R^2 = .36$, adjusted $R^2 = .34$; $F(3, 108) = 19.80$, $p < .001$). Partial regression coefficients showed that of the three subscales of family functioning entered in to the model, only Strengths and Adaptability had a significant unique contribution to life satisfaction ($B = -3.24$, $\beta = -.52$, $t(108) = -5.19$, $p < .001$). The Disrupted Communication subscale was not independently associated with life satisfaction, nor was the Overwhelmed by Difficulties subscale ($p = ns$, see Table 6 for partial regression coefficients). Family functioning, therefore, significantly predicted the variance in life satisfaction, and this association was carried by the Strengths and Adaptability subscale.

A further standard multiple regression was conducted, with psychological well-being entered as the dependent variable, and the three subscales of family functioning from the SCORE-15 entered as predictor variables. Again, overall family functioning explained a significant amount of the variance in psychological well-being ($R^2 = .23$, adjusted $R^2 = .21$; $F(3, 108) = 10.82$, $p < .001$). The partial regression coefficients indicated that the subscale of Strengths and Adaptability was independently and

significantly related to psychological well-being ($B = -.80$, $\beta = -.34$, $t(108) = -3.18$, $p = .002$). The Overwhelmed by Difficulties subscale also had a significant unique contribution to psychological well-being ($B = -.56$, $\beta = -.25$, $t(108) = -2.17$, $p = .033$). The Disrupted Communication subscale was not independently associated with psychological well-being ($p = ns$, see Table 6 for partial regression coefficients). Family functioning, therefore, predicted a significant amount of the variance in adolescent reported psychological well-being, and this association was carried by the subscales of both Strengths and Adaptability and Overwhelmed by Difficulties.

Table 6

Partial regression coefficients for dimensions of family functioning on life satisfaction and psychological well-being

	B	SE (B)	β	<i>t</i>	<i>p</i>
Family Functioning Subscales and Life Satisfaction					
Strengths and Adaptability	-3.24	.63	-.52	-5.19	.000***
Overwhelmed by Difficulties	-.34	.64	-.06	-.53	.599
Disrupted Communication	-.52	.79	-.07	-.67	.508
Family Functioning Subscales and Psychological Well-Being					
Strengths and Adaptability	-.80	.25	-.34	-3.18	.002**
Overwhelmed by Difficulties	-.56	.26	-.25	-2.17	.033*
Disrupted Communication	-.14	.32	-.05	-.45	.657

Note: Higher subscale scores reflect poorer family functioning.

Life Satisfaction $R^2 = .36$, Psychological Well-Being $R^2 = .23$

* $p < .05$ ** $p < .01$ *** $p < .001$

The results therefore show that family functioning predicted a significant amount of the variance in adolescent life satisfaction and psychological well-being. This association, however, was carried only by the subscale of Strengths and Adaptability for life satisfaction, and the Strengths and Adaptability and Overwhelmed by Difficulties subscales for psychological well-being.

Hypothesis 2

Adolescent reported life satisfaction and psychological well-being will mediate the relationship between family functioning and externalising behaviours.

Hypothesis 3

Adolescent reported life satisfaction and psychological well-being will mediate the relationship between family functioning and internalising behaviours.

The above hypotheses were tested using regression based path analyses (Baron and Kenny, 1986), with: scores on the SCORE-15 (measure of family functioning) entered as the independent variable; scores on the MSLSS (measure of life satisfaction) and WEMWBS (measure of general psychological well-being) entered as separate mediator variables, and scores on the externalising and internalising subscales of the SDQ entered separately as dependent variables. Bootstrapped confidence intervals (95%) were then calculated to examine the significance of the indirect effect.

The model shown in Figure 1 illustrates the current study's proposed mediation model. Path c represents the total effect of the independent variable on the dependent variable, which is the sum of both the direct and indirect effects. The indirect effect of the independent variable on the dependent variable via the mediator variable is the product of paths a and b (ab). Path c' represents the direct effect of the independent variable on the dependent variable when the indirect effect (ab) is controlled for.

In simple terms, a mediator is said to account for the relationship between the independent variable and the dependent variable (MacKinnon and Fairchild, 2009). Baron and Kenny (1986) suggest that a variable can be considered a mediator if it achieves the following four conditions:

1. The independent variable is significantly related to the dependent variable
2. The independent variable is significantly related to the mediator variable
3. The dependent variable is significantly related to the mediator variable
4. The relationship between the independent variable and the dependent variable is reduced once the mediator variable is controlled for.

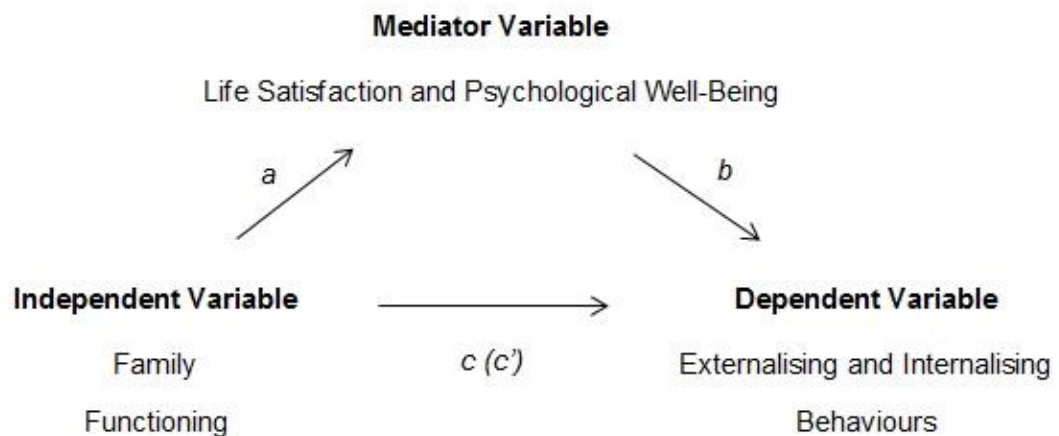


Figure 1. The current study's proposed mediation model.

a) Family Functioning and Externalising Behaviour: Life Satisfaction as a Mediator

Regression: Path Analyses

In the first step of testing this mediation model, externalising behaviour (DV) was regressed on to family functioning (IV). Family functioning was found to significantly predict externalising behaviour ($\beta = .33$, $t(110) = 3.68$, $p < .001$). In the second step,

life satisfaction (MV) was regressed on to family functioning (IV). The regression coefficients revealed a significant negative relationship between poorer family functioning and life satisfaction ($\beta = -.54$, $t(110) = -6.75$, $p < .001$), thereby establishing condition two for mediation.

In the final step, externalising behaviour (DV) was regressed on to both life satisfaction (MV) and family functioning (IV). After controlling for family functioning, life satisfaction was found to significantly predict externalising behaviour ($\beta = -.34$, $t(110) = -3.77$, $p < .001$), thereby establishing condition three for mediation. Furthermore, after controlling for the indirect effect, the direct effect between family functioning and externalising behaviour reduced and was no longer significant ($\beta = .21$, $R^2 = .15$, $t(109) = 1.98$, $p = .06$), and thus condition four for mediation was established.

Bootstrapping the Indirect Effect

As recommended by Field (2013), the indirect effect was further examined to determine whether it was statistically significant i.e. significantly different to zero. This was achieved using procedures described by Preacher and Hayes (2008) to obtain bootstrapped confidence intervals for the mediational relationship (path *ab*). Hayes (2009) states that this approach is preferable to Sobel's product of coefficients method (Sobel, 1982) as it does not assume that the sampling distribution of the indirect effect (*ab*) is normal, and controls for Type I errors whilst retaining greater power. Hayes (2009) suggests that if the bootstrapped confidence intervals (95%) do not span zero, then there is a 95% chance that the indirect effect is significantly different to zero, thereby meeting criteria for mediation.

A 95% confidence interval with 5,000 samples was generated for the indirect effect. Bootstrapped confidence intervals revealed that there was a significant indirect effect

of family functioning on externalising behaviours via life satisfaction ($b = .12$, BCa CI [.02, .25]). This represents a medium effect size ($k^2 = .11$, BCa CI [.02, .21]). Taken together, the results provide support for the mediating role of life satisfaction on the relationship between family functioning and externalising behaviours (see Figure 2).

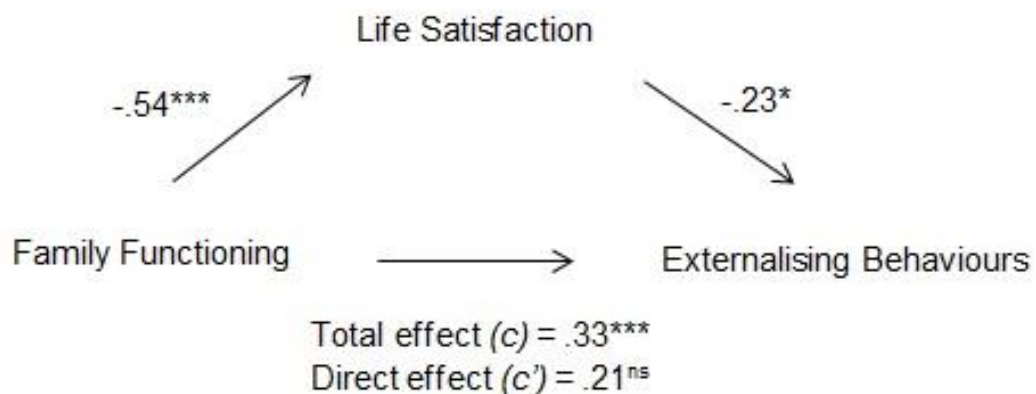


Figure 2. Mediation model with regression coefficients to test mediating role of life satisfaction on externalising behaviours.

* $p < .05$ *** $p < .001$

b) Family Functioning and Externalising Behaviour: Psychological Well-Being as a Mediator

Family functioning was found to significantly predict externalising behaviour ($\beta = .33$, $t(110) = 3.68$, $p < .001$) and psychological well-being ($\beta = -.45$, $t(110) = -5.30$, $p < .001$), establishing conditions one and two for mediation. After controlling for family functioning, however, psychological well-being was no longer significantly associated with externalising behaviour ($\beta = -.15$, $t(110) = -1.53$, $p = .128$), hence condition three was not established. The mediation model for psychological well-being on the relationship between family functioning and externalising behaviours (see Figure 3), therefore, was not supported.

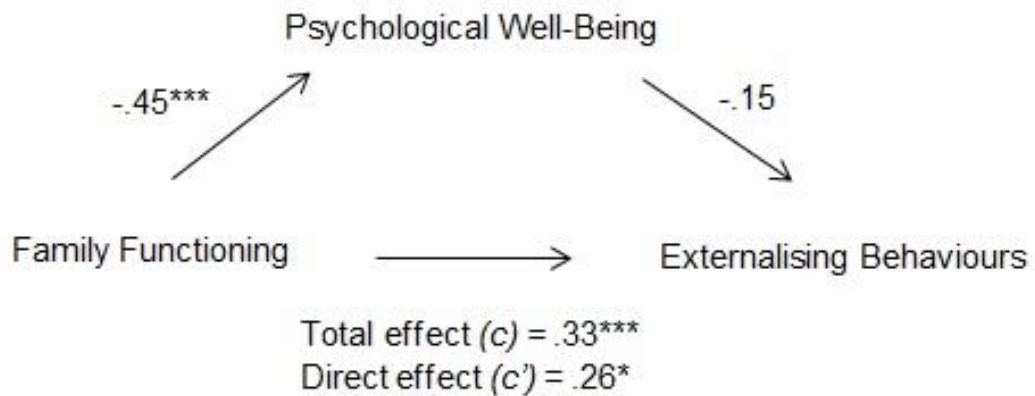


Figure 3. Mediation model with regression coefficients to test mediating role of psychological well-being on externalising behaviours.

* $p < .05$ *** $p < .001$

c) Family Functioning and Internalising Behaviour: Life Satisfaction as a Mediator

Regression analyses revealed a significant positive association between poorer family functioning and internalising behaviours ($\beta = .47$, $t(110) = 5.6$, $p < .001$) and a significant negative association between poorer family functioning and life satisfaction ($\beta = -.54$, $t(110) = -6.75$, $p < .001$), meeting conditions one and two for mediation. The final step of the path analysis revealed a negative association between life satisfaction and internalising behaviours. After controlling for family functioning, however, this was not significant ($\beta = -.10$, $t(110) = -.55$, $p = .582$), hence the third condition for mediation was not met. The mediation model for life satisfaction on the relationship between family functioning and internalising behaviours (see Figure 4), therefore, was not supported.

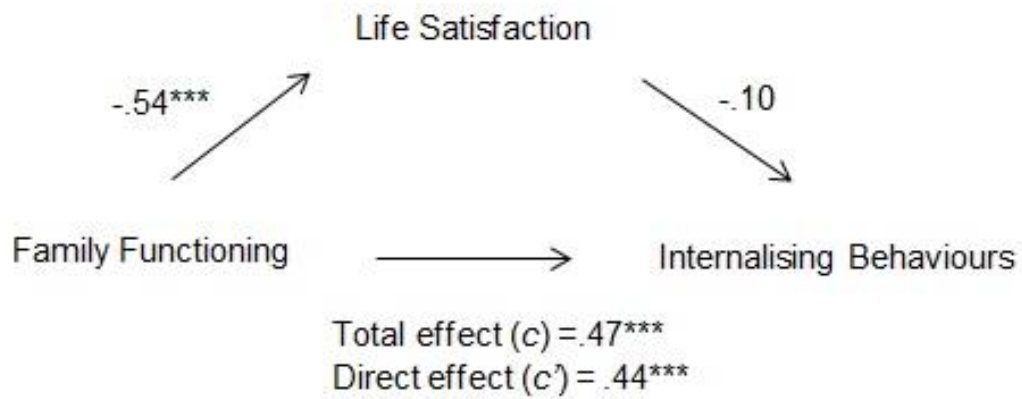


Figure 4. Mediation model with regression coefficients to test mediating role of life satisfaction on internalising behaviours.

$**p < .01$ $***p < .001$

d) Family Functioning and Internalising Behaviours: Psychological Well-Being as a Mediator

As above, the regression analyses indicated that family functioning significantly predicted internalising behaviour ($\beta = .47$, $t(110) = 5.6$, $p < .001$) and psychological well-being ($\beta = -.45$, $t(110) = -5.30$, $p < .001$), thereby establishing conditions one and two for mediation. After controlling for family functioning, psychological well-being also significantly predicted internalising behaviour ($\beta = -.30$, $t(110) = -3.37$, $p < .01$), and hence condition three for mediation was established. After controlling for the indirect effect, the direct effect of family functioning on internalising behaviour reduced ($\beta = .33$, $R^2 = .29$, $t(109) = 3.66$, $p < .001$), hence condition four for mediation was also met.

Bootstrapped 95% confidence intervals revealed that there was a significant indirect effect of family functioning on internalising behaviour through psychological well-being ($b = .14$, BCa CI [.06, .24]), and represented a medium effect size ($k^2 = .14$,

BCa CI [.06, .23]). Further analyses revealed that the indirect effect was also significantly different to the direct effect ($b = .41$, BCa CI [.14, 1.25]). These results, therefore, support the mediating role of psychological well-being on the relationship between family functioning and internalising behaviours (see Figure 5).

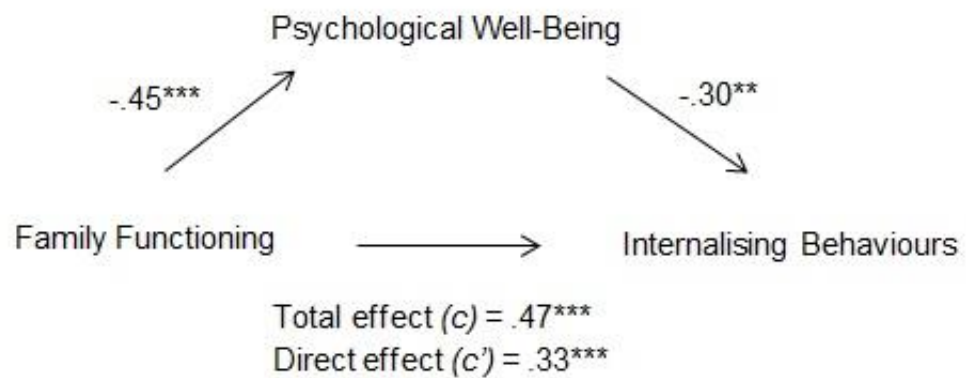


Figure 5. Mediation model with regression coefficients to test mediating role of psychological well-being on internalising behaviours.

$^{**}p < .01$ $^{***}p < .001$

Taken together, these results partly support Hypotheses 2 and 3. Mediation analyses revealed that life-satisfaction mediated the relationship between family functioning and externalising behaviours, whilst psychological well-being mediated the relationship between family functioning and internalising behaviours only.

CHAPTER 4: DISCUSSION

STUDY AIMS

The current study aimed to expand on the limited amount of research examining adolescent's perspectives of family functioning and how this relates to adolescent well-being. A number of limitations have been noted within the existing research, including methodological and conceptual issues. The current study aimed to take a step towards addressing some of these issues by defining and operationalising mental health and family functioning using a more holistic approach, incorporating strengths based measures of well-being and using a multidimensional measure of family functioning. The current study also aimed to build upon and expand the existing literature on the mechanisms which underlie the link between family functioning and adolescent psychopathology by examining the potential mediating role of both life satisfaction and psychological well-being.

SUMMARY OF RESULTS

Relationship between Demographics and Outcome Variables

Age was found to have a weak but significant negative relationship with internalising behaviours in the current sample of adolescents. That is, as age increased the less likely the adolescents were to report internalising behaviours, such as symptoms of anxiety and depression. This is somewhat surprising given that epidemiological research suggests the opposite is true, with prevalence rates for emotional problems increasing with age in to early adulthood (Merikangas, Nakamura and Kessler, 2009). This point will be returned to later in the chapter.

Females in the current sample were found to display significantly higher levels of internalising behaviours compared to males. This appears to be consistent with previous research, which has revealed the emergence of gender differences in terms

of internalising behaviours during adolescence, with females typically displaying more symptoms of anxiety and depression compared to males (van der Ende and Verhulst, 2005).

Finally, adolescents who had experienced a significant life event in the past 12 months reported significantly higher levels of internalising behaviours compared to adolescents who had not experienced a significant life event. This is in line with previous research which has found that adolescents meeting the clinical threshold for depression report significantly more negative life events compared to non-clinical controls (Williamson et al., 1998). It was surprising, however, that no significant differences were observed for self-reported levels of adolescent well-being, as had been found in existing research (Chappel et al., 2014). This point is returned to later in the chapter.

Relationship between Family Functioning and Psychopathology

Supplementary Pearson's correlations revealed that poorer family functioning was moderately and positively related to both internalising behaviours ($r = .47$) and externalising behaviours ($r = .33$) in adolescents. This indicates that adolescents who reported poorer levels of family functioning also reported more emotional and behavioural difficulties. These results are consistent with previous research which has found a significant positive relationship between aspects of family functioning (for example, parental conflict, mother-adolescent disagreement, warmth, emotional closeness etc.) and adolescent psychopathology (see Yap et al. (2014) for review).

The finding that poorer family functioning is related to elevated levels of internalising and externalising behaviours also fits with the ideas of systemic theory, in that emotional or behavioural difficulties are constructed within relationships, rather than residing in the individual (Ray, 2004). The internalising and externalising behaviours

displayed by the adolescents in the current study, therefore, may be a symptom of poor family functioning, whereby the adolescents' behaviour serves the function of distracting attention from difficult or problematic family dynamics in order to stabilise the family (Dallos and Draper, 2010). The use of correlational analyses, however, means that causation and directionality cannot be inferred. Furthermore, systemic theorists and the social ecological model (Bronfenbrenner, 1994) posit that interactional patterns and difficulties are bi-directional and circular in nature, and hence would not necessarily conclude that adolescent psychopathology is a direct result of poor family functioning (Dallos and Draper, 2010).

Main Findings in Relation to Hypotheses

Hypothesis 1: *Adolescents who report poorer levels of family functioning will report lower levels of life satisfaction and psychological well-being.*

The results of the current study support this hypothesis, with adolescents who reported poorer levels of family functioning also reporting lower levels of life satisfaction and psychological well-being.

Research Question 1: *Which aspects of family functioning are most strongly associated with adolescent life satisfaction and psychological well-being?*

Family functioning was found to predict a significant amount of the variance in both life satisfaction (36%) and psychological well-being (23%). Further analyses revealed that the only subscale of family functioning found to be uniquely related to life satisfaction was the Strengths and Adaptability subscale. Both the Strengths and Adaptability and Overwhelmed by Difficulties subscales were found to be uniquely related to psychological well-being.

Hypothesis 2: *Adolescent reported life satisfaction and psychological well-being will mediate the relationship between family functioning and internalising behaviours.*

Hypothesis 3: *Adolescent reported life satisfaction and psychological well-being will mediate the relationship between family functioning and externalising behaviours.*

The results of the current study partly supported the above hypotheses. Life satisfaction was found to mediate the relationship between family functioning and externalising behaviours, but not internalising behaviours. Conversely, psychological well-being was found to mediate the relationship between family functioning and internalising behaviours, but not externalising behaviours.

DISCUSSION OF MAIN FINDINGS

Relationship between Family Functioning and Adolescent Well-Being

Central to the aim of the current study was the consideration of the relationship between family functioning and positive indicators of adolescent well-being, namely life satisfaction and psychological well-being. Despite the growing recognition of the importance of promoting mental health and using strength based approaches in psychology and mental health research, much of the existing research has failed to consider mental health in terms of psychological strengths or well-being. Where the relationship between family functioning and well-being has been assessed, this has often focussed solely on adolescent life satisfaction or self-esteem (Shek, 2005; Suldo and Huebner, 2004a). Furthermore, much of the existing literature has been conducted in China, where family structures, beliefs and parenting practices are likely to be very different from those in the UK, which may limit the generalisability of findings to adolescents in the UK.

The results from Pearson's correlations supported the current study's hypothesis, that poorer family functioning would be related to lower levels of life satisfaction and

psychological well-being in adolescents. The findings in relation to both life satisfaction and psychological well-being are further discussed below.

Life Satisfaction

In the current study, Pearson's correlation revealed a moderate negative relationship between family functioning and adolescent life satisfaction ($r = -.54$), indicating that adolescents who reported poorer levels of family functioning were less satisfied with their lives. This finding supports the previous literature, for example, Rask et al. (2003), who examined the impact of general family functioning on adolescent life satisfaction. In their study, 239 Finnish adolescents aged between 12 and 17 years were asked to complete an indigenous, 66-item measure of family functioning based on the Family Dynamics Measure along with a translated version of the 38-item Berne Questionnaire of Subjective Well-Being Youth Form. Spearman's correlation analyses revealed a moderate positive relationship between adolescents' perceptions of family functioning and adolescent life satisfaction ($r = .49$). More recently, Chappel et al. (2014) investigated the relationship between different family stressors (including family functioning) and life satisfaction in 11 to 15 year olds in the United States ($N = 183$). In order to assess family functioning, adolescents' completed self-reported measures of interparental conflict (the Children's Perception of Interparental Conflict scale), alongside a self-reported measure of life satisfaction (the Student's Life Satisfaction Scale). As in the current study, the results from correlational analyses revealed a moderate, negative relationship between adolescent reported levels of family functioning and satisfaction with life ($r = -.54$).

Psychological Well-Being

In the current study, Pearson's correlation indicated a moderate negative relationship between family functioning and psychological well-being in adolescence ($r = -.45$).

These results are also in line with those reported by existing research. Shek (2002) investigated the relationship between adolescents' perceptions of global family functioning and aspects of eudaimonic well-being in a sample of 1,519 Chinese adolescents. Global family functioning was assessed using an indigenously developed 33-item measure of family functioning (the Chinese Family Assessment Instrument). The researcher operationalised adolescent well-being using a measure of existential well-being (the Existential Well-Being Scale) and self-esteem (the Self-Esteem Scale). The correlation coefficients revealed a moderate negative relationship between family dysfunction and levels of existential well-being ($r = -.52$), and a moderate negative relationship between family dysfunction and self-esteem ($r = -.39$). This study was one of the first of its kind to demonstrate this relationship between family functioning and positive indicators of mental health in adolescence. The researchers, however, used a Chinese sample and indigenous measures hence the findings may have limited generalisability to adolescents within the UK. Despite this, the current study revealed similar findings to Shek (2002), in that poorer levels of family functioning were related to lower levels of positive mental health in adolescence. Differences in the conceptualisation and measurement of family functioning and psychological well-being in the existing literature, however, makes it difficult to draw direct comparisons between the results of the current study and previous research. In spite of this, the results do appear to support the notion that poorer family functioning is related to poorer levels of eudaimonic well-being in adolescence, as well as symptoms of distress or psychopathology.

The Association between Family Functioning and Adolescent Well-Being

Existing research identified the need to examine how family functioning can contribute to flourishing or well-being in adolescence, as well as identifying the systemic processes which are most influential in this relationship (Rask et al., 2003).

The current study expanded on the existing research by examining the overall contribution of family functioning, as well as the unique contribution of each dimension of family functioning, towards life satisfaction and psychological well-being.

Results from multiple regression analyses showed that family functioning had a significant and unique contribution to adolescent life satisfaction and psychological well-being. Differences were observed, however, in the dimensions of family functioning which carried this association. These results are further discussed below.

Overall Family Functioning

Multiple regression analyses revealed that overall family functioning had a significant and unique contribution to adolescent reported life satisfaction and psychological well-being, explaining 36% and 23% of the variance, respectively. This indicates that adolescents' perceptions of family functioning significantly predicted the level of satisfaction they had with their life, as well as their levels of psychological well-being.

These results support the findings of previous research examining the contribution of the family environment and functioning to positive indicators of adolescent well-being. In Ash and Huebner's (2001) study, students aged 14-18 years (N = 152) completed self-reported measures of acute and chronic life stressors, including aspects of familial stress (the Life Stressors and Social Resources Inventory-Youth Form), locus of control (the Nowicki-Strickland Locus of Control Scale), and life satisfaction (the Student's Life Satisfaction Scale). The results from multiple regression revealed that chronic stressors (such as interparental conflict) were found to exert a larger negative effect on life satisfaction compared to acute stressors (such as the death of a family member). After controlling for the impact of acute stressful events, chronic stressors accounted for 19% of the variance in adolescent life satisfaction. This research, however, focussed on chronic stress as a whole rather than looking specifically at the

chronic stressor of interparental conflict. In a later study, Chappel et al. (2014) explored the association between interparental conflict and adolescent life satisfaction in a sample of American high school students ($N = 183$). The results from multiple regression showed that (after controlling for socio-economic status and significant life events) interparental conflict explained 13% of the variance in adolescent reported life satisfaction. As with much of the research in this field, however, the researchers conceptualised family functioning in terms of the dyadic process of interparental conflict, rather than considering family functioning at the systemic level. Furthermore, the researchers reported that two-thirds of the sample identified as being from black and minority ethnic backgrounds, and hence the results may not generalise to those of the current study.

In terms of more eudaimonic or objective aspects of well-being, the existing research appears to provide tentative support for the findings of the current study. Preechawong et al. (2007), for example, examined the association between adolescent reported global family functioning, self-esteem and resourceful coping in a sample of 12-17 year olds ($N = 132$) with asthma. The results from multiple regression analyses showed that (after controlling for gender and age) global family functioning significantly predicted both self-esteem and resourceful coping. Moreover, using a longitudinal design, Shek (2005) examined the association between family functioning and aspects of psychological well-being in a sample of Chinese adolescents aged 12–16 ($N = 199$). Adolescents completed self-reported measures of family functioning (the Chinese Family Assessment Instrument), existential well-being (the Existential Well-Being Scale), mastery (the Mastery Scale) and self-esteem (the Self-Esteem Scale). Multiple regression analyses revealed that adolescents' perceptions of family functioning at Time 1 significantly predicted self-reported levels of existential well-being and mastery at Time 2. Specifically, lower levels of family functioning reported at Time 1 predicted deterioration in existential

well-being and mastery 12 months later. This effect, however, was stronger for females compared to males implying gender differences in the association between family functioning and eudaimonic well-being in this sample. Whilst the results generally support the finding of the current study in that family functioning was found to be a significant predictor of more eudaimonic aspects of well-being in adolescence, the differences in design, sample and measurement make it difficult to generalise the findings to the current study. Furthermore, given the limited scope of the current study, potential gender differences were not explored.

Dimensions of Family Functioning

Results from multiple regression analyses revealed that the only subscale of family functioning which had a significant and unique association with adolescent reported life satisfaction was Strengths and Adaptability (see Figure 6 for multiple regression diagram).

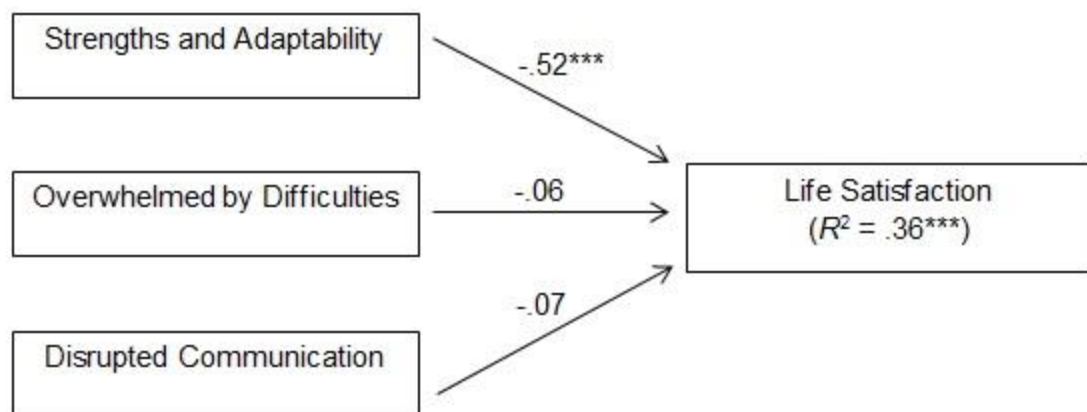


Figure 6: Multiple regression diagram for dimensions of family functioning and life satisfaction.

*** $p < .001$

The above results indicate that adolescents' perceptions of their families as lacking in strengths, particularly in adaptability or the ability to find new ways of dealing with difficulties, were associated with lower levels of life satisfaction. The presence of difficulties within the family (Overwhelmed by Difficulties subscale) and having unhelpful or hostile patterns of communication within the family (Disrupted Communication subscale) did not appear to significantly predict life satisfaction in adolescents. This suggests that, regardless of whether there are difficulties or conflicting patterns of communication within the family, it is the family's ability to manage difficulties and adjust where necessary which best predicts adolescent life satisfaction.

In terms of adolescent reported psychological well-being, a slightly different pattern of results emerged. Multiple regression analyses indicated that the subscales of family Strengths and Adaptability and Overwhelmed by Difficulties significantly predicted adolescent psychological well-being (see Figure 7 for multiple regression diagram).

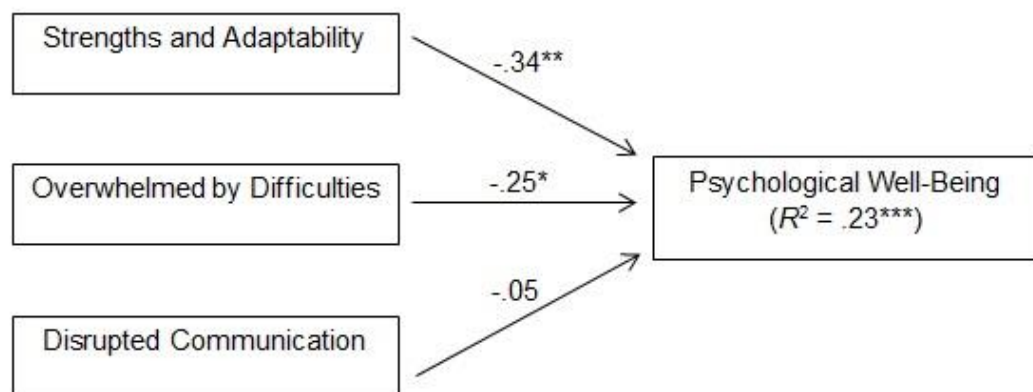


Figure 7: Multiple regression diagram for dimensions of family functioning on psychological well-being.

* $p < .05$ ** $p < .01$ *** $p < .001$

These results suggest that, as with life satisfaction, adolescents' perceptions of their families as rigid and lacking in strengths or effective ways of dealing with difficulties when they arise was predictive of lower levels of psychological well-being. Furthermore, adolescents' perceptions that their family was overwhelmed with difficulty and not able to cope with crises also appeared to predict lower levels of psychological well-being.

The fact that the current study found no effect of disrupted communication on adolescent well-being was somewhat surprising, particularly as previous research has found a significant relationship between related factors, such as interparental conflict, and adolescent life satisfaction (Chappel, Suldo and Ogg, 2014; Rask et al., 2003). Much of this research, however, has been based on correlational analyses with the directionality of the relationship given little attention. Furthermore, as the dimensions of the SCORE-15 differ to those examined in previous life satisfaction research, it is difficult to draw direct comparisons between the current findings and those of existing research.

Despite these limitations, the current findings can be discussed in relation to results from similar research. Chappel et al. (2014) employed multiple regression to examine various family stressors on life satisfaction and found that interparental conflict, which would be most closely associated with the dimension of Disrupted Communication in the current study, predicted 13% of the variance in adolescent life satisfaction. The authors, however, did not take in to account the adolescents' relationship with other significant members of the family, which the current study attempted to do.

A review of the literature found just one previous study collectively examining different dimensions of family functioning and their association with adolescent well-being. In Rask and colleagues' (2003) study, six dimensions of family functioning were explored: 1) individuation (i.e. the extent to which the adolescent sees

themselves as separate and distinct within their relational context); 2) mutuality (i.e. the emotional bond and sense of closeness between members of the family); 3) communication (i.e. how clear and consistent communication is); 4) flexibility (i.e. the capacity to adjust to difficulties or change); 5) stability (i.e. the security and consistency of family interactions) and 6) roles (i.e. the level of clarity around roles and expectations of family members) . In this study, well-being was measured using a translated version of the Berne Questionnaire of Subjective Well-Being. Regression analyses revealed that only the subscales of Mutuality and Stability were found to be uniquely associated with adolescent life satisfaction, collectively predicting 52% of the variance. These results indicate that the perceived level of emotional closeness and the consistency of the interactions between family members significantly predicted adolescents' level of life satisfaction. The remaining dimensions were not found to have a significant unique association with life satisfaction. Given that the current study assessed different dimensions of family functioning to Rask et al. (2003) it is difficult to draw direct comparisons between the two studies. There do, however, appear to be some resemblances between the findings, for example, no significant effect of disrupted communication. Furthermore, similarities can be drawn between Rask and colleagues' dimension of Mutuality and the SCORE-15's dimension of Strengths and Adaptability (in relation to emotional closeness and a sense of trust within the family) both of which were found to significantly predict adolescent life satisfaction. Rask and colleagues, however, found that the dimension of Flexibility was not uniquely associated with adolescent life satisfaction, whereas the SCORE-15's related dimension of Strengths and Adaptability was found to be uniquely associated with life satisfaction in the current study. These inconsistent results, however, could be explained by differences between the samples, including age and cultural differences. Furthermore, the internal validity of the study was compromised

as the researchers reported limited reliability of the measures, with Chronbach's alpha reported to be as low as .56 for some of the subscales of family functioning.

In terms of psychological well-being, tentative support is provided for the findings of the current study from existing research examining the association between family variables and positive indicators related to psychological well-being. Liem et al. (2010), for example, investigated the impact of authoritative parenting on self-development in a large sample of adolescents ($N = 1,325$). Whilst various models suggest that family functioning is much more than parenting style, authoritative parenting is likely to be linked to clear communication and limit setting within families, whilst maintaining warmth and emotional closeness (Suldo and Huebner, 2004b). Adolescent self-development was defined as having a developed sense of self-worth and personal agency, two concepts of which are closely related to the dimensions of Self-Acceptance, Personal Growth and Autonomy within Ryff's (1989) model of psychological well-being. Self-worth and personal agency were measured using an abbreviated version of the Self-Esteem Scale and Pearlin's Mastery Scale. The results from regression analyses revealed that levels of authoritative parenting at Time 1 significantly predicted both self-worth and personal agency at Time 2, two years later. Furthermore, in a cross sectional study, Uruk et al. (2008) looked more specifically at dimensions of family functioning and Ryff's (1989) Scales of Psychological Well-Being in a sample of undergraduate students ($N = 189$). Family adaptability and cohesion were measured using a self-report scale (the Family Adaptability and Cohesion Evaluation Scale; Olson et al., 1985) along with students' overall Psychological Well-Being (Ryff, 1989). Results from multiple regression analyses found that dimensions of Adaptability and Cohesion significantly predicted levels of Psychological Well-Being in students. These results appear to provide support for the findings of the current study, in that levels of family adaptability significantly predicted aspects of the students' eudaimonic well-being. Again,

differences in the sample and measures used make it difficult to generalise the results to the current study.

Summary

In relation to life satisfaction and psychological well-being, the current study highlighted the importance of family adaptability regardless of whether the family experienced overwhelming difficulties or disrupted patterns of communication. This finding links in with existing resiliency literature, which suggests that it is the family's ability to adjust in the face of crisis which is of critical importance to the well-being of family members (Kalil, 2003). Furthermore, it is argued that families become more flexible and adaptive as a result of having to manage and overcome the difficulties (Kalil, 2003).

Given that adolescence presents a time when the individual attempts to individuate and build their own identity as separate from their family, it is possible that arguments and differing opinions within the family may be seen as a normal and healthy part of the individuation process, and therefore disrupted patterns of communication do not impact negatively on the adolescent's well-being. Furthermore, during the period of adolescence, peer relationships become increasingly important and influential (Ben-Zur, 2003; Shiedow et al., 2014), hence it is possible that disrupted communication within the family has less of an effect on adolescent well-being than perhaps disrupted communication between peers. As the adolescent begins to develop their own identity and pursue goals outside of their family life (e.g. peer relationships, academic achievement etc.) it is possible that in the presence of family difficulties, adolescents are able to draw satisfaction from other important areas of their life thereby minimising the influence of problems within the family.

The feeling of being overwhelmed by difficulties within the family, however, did significantly predict psychological well-being in adolescents. One possible explanation for this finding is that, for example, feeling that your family seems to *go from one crisis to another*, or that things *always seem to go wrong* for your family (example items from the Overwhelmed by Difficulties subscale) could possibly impact upon the adolescents' sense of control, autonomy and self-efficacy, which would likely lead to lower levels of self-reported psychological well-being.

Taken together, the results highlight the importance of family strengths (in terms of adaptability, effective problem solving and trust, for example) and how these factors significantly predict well-being in adolescence. These results are consistent with existing research which highlights the transmission of psychological strengths and resilience from families to adolescents (Hill, Stafford, Seaman, Ross and Daniel, 2007), and that the well-being of children and adolescents is closely linked to the well-being of their families (Wollny, Apps and Henricson, 2010). These findings also fit with previous literature which suggests that the ability to adjust to adversity has as much influence on well-being as adversity in its self (MacLeod and Moore, 2000).

The Mediating Role of Life Satisfaction and Psychological Well-Being

Existing research in the field of developmental psychopathology highlights the need to explore potential mechanisms which underlie the relationship between family stressors (including poor family functioning) and psychopathology (Frosch and Mangelsdorf, 2001; Grant et al., 2006; Liem et al., 2010; Shelton and Harold, 2007). In particular, the existing research proposes that more attention should be paid towards the mediating processes involved in this relationship (Grant, Compas, Thurm, McMahon and Gipson, 2004; Shelton and Harold, 2007). The current study expanded on the existing literature by examining the potential mediating role of life

satisfaction and psychological well-being on the relationship between family functioning and externalising and internalising behaviours in adolescence.

The current study hypothesised that life satisfaction and psychological well-being would mediate the relationship between family functioning and both externalising and internalising behaviours. Findings from the current study revealed that life satisfaction mediated the relationship between family functioning and externalising behaviours only. Furthermore, psychological well-being was found to mediate the relationship between family functioning and internalising behaviours only. The results, therefore, only partially supported the current study's hypotheses. The mediating role of life satisfaction and psychological well-being in relation to the current study and previous research is further discussed below.

The Mediating Role of Life Satisfaction

In the current study, whilst life satisfaction was hypothesised to mediate the relationship between family functioning and both internalising and externalising behaviours, results from path analyses and bootstrapping indicated that life satisfaction mediated the relationship between family functioning and externalising behaviours only (see Figure 8 for mediation model). This indicates that poorer levels of perceived family functioning were associated with lower levels of life satisfaction, which in turn predicted greater levels of externalising behaviours in adolescence. This relationship is not surprising given the growing body of research which has identified a relationship between environmental factors (including the family environment) and adolescent life satisfaction, and environmental factors and adolescent behaviour (Suldo and Huebner, 2004b). The findings of the current study indicate that adolescent life satisfaction serves as a mediating variable between the family environment (family functioning) and problem behaviour in adolescence.

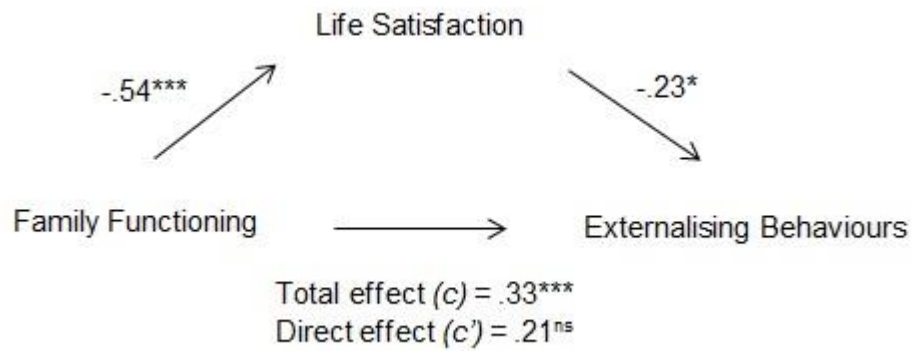


Figure 8: Mediation model with regression coefficients for mediating role of life satisfaction on externalising behaviour.

These results support the findings of previous literature which indicates that poor family functioning achieves its effects on externalising behaviours via its association with life satisfaction. For example, Chappel (2011) explored the relationship between family functioning, life satisfaction and substance misuse (which falls within the category of ‘externalising behaviours’) in adolescents aged 12-18 ($N = 181$). In this study, family functioning was assessed using a self-reported measure of interparental conflict. Results from path analyses revealed an indirect association between adolescent reported interparental conflict and substance use, with life satisfaction acting as a mediator. More specifically, Chappel (2011) states that adolescents who perceived higher levels of interparental conflict experienced lower levels of life satisfaction, which in turn predicted higher levels of substance misuse.

The results from the current study, however, did not support the hypothesis that life satisfaction would also mediate the relationship between family functioning and internalising behaviours. Existing research related to the current study’s aims is suggestive of a mediating role for life satisfaction in this relationship. McKnight et al. (2002), for example, explored the relationship between stressful life events (including family conflict), life satisfaction and internalising and externalising behaviours in a

large sample of 13-18 year old students ($N = 1,201$). Students completed self-reported measures of life events, life satisfaction and internalising and externalising behaviours. Results from path analyses indicated a significant indirect relationship between stressful family events and both internalising and externalising behaviours, supporting the mediating role of life satisfaction. Furthermore, Suldo and Huebner (2004b) examined the relationship between three dimensions of authoritative parenting (Autonomy Granting, Supervision and Parental Social Support i.e. the adolescents' perceived level of support from their parent), life satisfaction and internalising and externalising behaviours. The results indicated that life satisfaction mediated the relationship between all three dimensions of authoritative parenting and internalising and externalising behaviours in adolescence. The results of the current study are therefore surprising given the mediating role of life satisfaction between parental factors and both externalising and internalising behaviours in previous research. The way in which life satisfaction was measured may account for the differences observed in results, with Suldo and Huebner (2004b) measuring general life satisfaction using a seven-item scale, whereas the current study used the total life satisfaction score of a 40-item measure across different domains.

The Mediating Role of Psychological Well-Being

In the current study, psychological well-being was hypothesised to mediate the relationship between family functioning and internalising and externalising behaviours in adolescence. The results of path analyses and bootstrapping revealed that psychological well-being mediated the relationship between family functioning and internalising behaviours only, therefore partly supporting this hypothesis (see Figure 9 for mediation model).

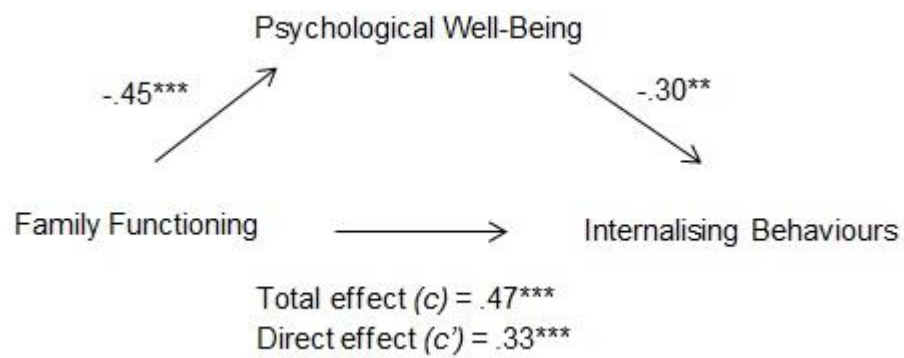


Figure 9: Mediation model with regression coefficients for psychological well-being on internalising behaviour.

$^{**}p < .01$ $^{***}p < .001$

As stated above, the potential mediating role of eudaimonic aspects of well-being is less well explored compared to life satisfaction, and as a result, data with which to compare the current results is lacking. Existing research examining factors relating to the family environment and other positive indicators of well-being, however, can be drawn on which provides tentative support for the findings of the current study. Liem et al. (2010), for example, in their longitudinal study, examined the relationship between authoritative parenting, self-esteem (as measured by the Self-Esteem Scale), mastery (as measured by Pearlin's Mastery Scale) and symptoms of depression in adolescents ($N = 1,325$). The authors reported that mastery fully mediated the relationship between authoritative parenting and symptoms of depression, whilst self-esteem partially mediated this relationship. This suggests that authoritative parenting perhaps supported the development of a positive sense of self-worth and personal agency for the adolescents, which in turn reduced the risk of developing symptoms of depression. Furthermore, in their cross-sectional study, Robitschek and Kashubeck (1999) explored the mediating role of resilience and Personal Growth (Ryff, 1989) in the relationship between family functioning and

symptoms of depression (N = 294). Structural equation modelling revealed that resilience and Personal Growth mediated the relationship between family functioning and internalising behaviours. The mediating role of self-worth in the relationship between family functioning and both externalising and internalising behaviours was examined by Haine et al. (2003). School children aged eight to 16 years (N = 76) completed measures of family functioning, self-esteem, locus of control and internalising and externalising behaviours, along with their parents. Results from path analyses showed that child reported self-worth fully mediated the relationship between family functioning and internalising behaviours, but not externalising behaviours. Taken together, therefore, these results offer tentative support for the findings of the current study, for the potential mediating effects of aspects of psychological well-being in the relationship between family functioning and internalising behaviours.

Summary

The results of the current study appear to support previous findings that indicators of both hedonic and eudaimonic well-being play a mediating role in the relationship between family functioning and adolescent psychopathology. The results of the current study, however, suggest that the mediation pathways for internalising and externalising behaviours may differ, with life satisfaction mediating the relationship between family functioning and externalising behaviours, and psychological well-being mediating the relationship between family functioning and internalising behaviours. More specifically, the results suggest that adolescents who perceive their families as rigid and unable to problem solve effectively are more likely to report lower levels of life satisfaction, and in turn experience more externalising behaviours. Furthermore, adolescents who perceive their family to be rigid and overwhelmed by

difficulties are more likely to report lower levels of psychological well-being, and in turn experience more internalising behaviours.

These results may be suggestive of individual differences in the way adolescents appraise family functioning within the family. Life satisfaction is purported to be a cognitive appraisal of one's contentment with life (Suldo and Huebner, 2004b) which, in the current study, a majority was based on external factors, for example, school, peers, neighbourhood and living environment. Psychological well-being, on the other hand, is more concerned with appraisals of internal factors, for example, the individuals' abilities, feelings and personal strengths. It could be hypothesised that the impact of poor family functioning on the adolescent differs depending on whether the individual makes an internal or external appraisal of the difficulties. Life satisfaction may be more likely to be affected in individuals who make an external cognitive appraisal of poor family functioning, whereas psychological well-being may be more likely to be affected in individuals who internalise poor family functioning. These differing styles of cognitive appraisal may also influence the way in which the adolescent responds to the difficulties, for example, those adolescents with an external focus may be more likely to subsequently display externalising behaviours, whereas those adolescents with an internal focus may be more likely to display internalising behaviours. The role of cognitive appraisals on the relationship between marital conflict and internalising behaviours in adolescence was highlighted by Xin, Chi and Yu (2009). In their cross-sectional study (N = 549), the authors found that adolescents who reported feeling more threat and had self-blame attributions for family dysfunction were significantly more likely to experience negative affect than adolescents who did not have these self-blame attributions. Furthermore, adolescents' appraisal style was found to fully mediate the relationship between marital conflict and internalising behaviours. This interpretation is also supported by existing theories of psychosocial development in adolescence which suggest that the

family environment plays a critical role in the development of the adolescent's well-being and sense of identity (Mann, Hosman, Schaalma and de Vries, 2004). It has been hypothesised that the way in which the individual responds to these issues depends on personality characteristics, individual circumstances and life events with those who internalise family difficulties having a disrupted sense of self and responding with passive or internalising escape routes, such as symptoms of anxiety and depression. Individuals with externalising tendencies may be more likely to externalise such difficulties and respond to these with aggression and behavioural difficulties (Mann, Hosman, Schaalma and de Vries, 2004).

It is also possible that gender differences may play a role in these contrasting findings, with existing research suggesting that females are more likely to attribute difficulties (including relational and interpersonal difficulties) internally, whereas males are more likely to make external attributions (Blatt-Eisengart, Drabick, Monahan and Steinberg, 2009; Leadbeater, Kuperminc, Blatt and Hertzog, 1999). Furthermore, Shek's (2002; 2005) finding that the relationship between family functioning and both well-being and psychopathology is stronger for females than it is for males suggests that had a larger proportion of females been included in the current sample, then the co-efficients for paths *a* and *c* may have been larger and more significant, which may have influenced the size and significance of the indirect effect.

IMPLICATIONS OF RESEARCH

The results of this study yield important implications for both theory and practice. In terms of theory building, the finding that life satisfaction and psychological well-being were significantly correlated supports Deci and Ryan's (2008) notion that models of hedonic and eudaimonic well-being may not be completely distinct from one another. Interestingly, the results of the current study imply that life satisfaction and psychological well-being appear to operate differently in their effects on internalising

and externalising behaviours in adolescence, which suggests that despite their relatedness, it may be helpful to continue to view them as separate constructs.

The weak to moderate negative correlations between variables of well-being and psychopathology found in the current study is supported by previous research, and suggest that these two constructs are not simply polar opposites. Previous validation studies using large samples of adolescents, for example, have found significant moderate correlations between the WEMWBS (a measure of well-being) and the SDQ and General Health Questionnaire-12 (measures of illness or psychopathology) (Clarke et al., 2011; DoH, 2014; Tennant et al., 2007). Whilst the results show that well-being is related to psychopathology, it also displays its own level of distinctiveness and therefore cannot simply be conceptualised as the opposite of mental illness.

The finding that adolescents' perception of family functioning was significantly related to their positive mental health, namely satisfaction with life and psychological well-being, has important clinical and theoretical implications. More specifically, the finding that particular dimensions of family functioning appear more notable than others in terms of their ability to predict well-being in adolescence is of particular relevance. For example, the unique contribution of Strengths and Adaptability subscale to both adolescent reported life satisfaction and psychological well-being suggests that families who are flexible in the face of difficulty are more likely to have children who report higher levels of positive mental health.

The results of the mediation analyses also provide some insight into how adolescents' perceptions of family functioning might influence adolescent psychopathology, specifically internalising and externalising behaviours. The results of the current study indicate that those adolescents who experience poorer family functioning are more likely to report symptoms of anxiety, depression and behavioural

difficulties, possibly via its impact on life satisfaction and psychological well-being. This finding is consistent with the ideas of theorists from the positive psychology movement who suggest that poorer mental health or well-being, may leave an individual vulnerable to experiencing negative outcomes or symptoms of mental illness (Ryff and Singer, 2008). Taken together, these findings provide further evidence for the need to support families (taking the time to build on strengths and resilience) to enhance the well-being of their children.

Clinical Practice

In examining the contribution of family functioning to adolescent well-being, the current study draws attention to the role that family can also play in fostering the well-being of adolescents. The unique contribution of family functioning to both adolescent life satisfaction and psychological well-being highlights the potential benefit of involving parents or significant family members in interventions which promote the well-being of adolescents. More importantly, in delineating the specific dimensions of family functioning which contribute to adolescent well-being, the current study emphasises which dimensions of family functioning might be more helpful to work with when considering the healthy development of the adolescent. The unique contribution of the Strengths and Adaptability subscale to both adolescent reported life satisfaction and psychological well-being highlights the potential benefit of promoting adaptability and effective problem solving within the family, rather than solely with the adolescent. Whilst systematic reviews of well-being interventions with children and adolescents repeatedly highlight the importance of involving parents and families, little guidance is provided on how to do this effectively (NICE, 2012). Furthermore, a majority of the existing well-being interventions for adolescents fail to involve the family at all. The findings of the current study, therefore, may provide some guidance on how to involve parents or families in well-being interventions in a

more helpful way, for example, developing an intervention to facilitate flexibility and effective problem solving skills for the whole family. The current findings also supports the use of a strengths based approach to working with potentially vulnerable families and adolescents (e.g. Munford and Sanders, 2001), whereby clinicians aim to identify and build on the family's competencies and skills rather than focusing on deficits.

The finding that life satisfaction is predictive of externalising behaviours and that psychological well-being is predictive of internalising behaviours after controlling for family functioning further supports the utility of promoting adolescent well-being rather than focusing purely on symptom management. In line with this, there is an emerging evidence base for well-being therapy, which focuses on fostering psychological strengths in line with Ryff's (1989) Scales of Psychological Well-Being, and has been used successfully alongside cognitive-behavioural therapy (CBT) to enhance clinical outcomes (Fava and Ruini, 2003; Ruini and Fava, 2012).

Finally, the results suggest that family functioning and its relationship with internalising and externalising behaviours in adolescents may operate via different pathways (via psychological well-being and life satisfaction, respectively). Preventative interventions designed to protect adolescents from developing symptoms of anxiety and depression, for example, may benefit from promoting psychological well-being, whereas those which are designed to protect adolescents against the development of behavioural difficulties and conduct problems may benefit from promoting life satisfaction. Furthermore, interventions which aim to protect against the development of both internalising and externalising behaviours may benefit from including strategies aimed at enhancing both psychological well-being and life satisfaction within their intervention.

School Based Interventions

Given that the current study was carried out with a school based population, the results also have implications for school settings. In terms of mental health intervention in schools, the current findings support the utility of focusing on promoting the well-being of students, rather than purely on managing or reducing symptoms of anxiety and depression, or behavioural problems. The existing research on schools based well-being interventions emphasise the importance of enhancing correlates of life satisfaction and well-being, such as relationships with family and peers, school climate, teacher-student relationships, self-esteem, hope and gratitude (Suldo, Huebner, Savage, and Thalji, 2011; Ruini et al., 2009).

The focus on well-being promotion, rather than symptom management or reduction, fits with a more universal approach to managing students' mental health in schools, whereby all students partake in intervention, regardless of their level of difficulties. This universal approach to mental health within the school setting can help to overcome the ethical issues around exclusion and the stigma often associated with targeted interventions, whereby individuals are selected for participation based on the presence of symptoms or risk factors for mental illness (Faculty of Public Health, 2010). Recent universal programmes based on symptom management, however, have been found to be minimally effective, and in some cases the interventions have been associated with an increase in symptoms. Stallard et al. (2012) evaluated a universal, classroom based programme which used principles of CBT to reduce symptoms of depression in adolescents. In this randomised controlled trial, 12-16 year olds (N = 5,030) were allocated to the CBT intervention, attention control (whereby additional members of staff were present in the lesson) or treatment as usual (Personal, Social and Health Education [PSHE] lesson). At 12 month follow-up, no significant differences were observed in symptoms of depression between the CBT group and attention control group. Furthermore, adolescents who had been

identified as at risk for developing depression reported an increase in their symptoms after completing the CBT intervention compared to those in the treatment as usual group. The authors suggested that the CBT intervention may therefore have had a detrimental effect on adolescents who were perceived as being at risk for depression. More recently, universal school-based interventions aimed at reducing symptoms of depression and anxiety using CBT have reported limited clinical and cost-effectiveness compared to usual PSHE lessons (Anderson et al., 2014; Stallard et al., 2014). School-based interventions focusing on the promotion of well-being and psychological strengths may provide a feasible alternative to interventions which focus on reducing symptoms of depression or anxiety, and have the added benefit of being clinically useful to all adolescents, not just those who are at risk of developing mental health problems. However, for schools which perhaps do not have the resources to support universal interventions, the findings of the current study suggest that well-being interventions targeted at improving life satisfaction and psychological well-being in those who experience poor levels of family functioning may be useful in protecting against the later development of mental health difficulties. The current study, therefore, also highlights the potential benefit of teachers spending more time on parent consultation and identifying students who may be experiencing poorer levels of family functioning given its potential impact on well-being.

STRENGTHS OF CURRENT STUDY

The current study made a step towards addressing some of the aforementioned limitations of the existing literature, for example, the tendency of researchers to conceptualise well-being as the absence of symptoms or distress. Following the positive psychology movement and the recognised shift towards mental health promotion in the child and adolescent literature, well-being in the current study was conceptualised more holistically, using well validated, age appropriate, strengths

based measures, which tapped in to both hedonic and eudaimonic aspects of well-being.

Much of the existing research in this field has relied on proxy measures of family functioning which examine dyadic relationships only, for example, interparental conflict or parenting style. The current study built upon the existing literature by using a well validated, reliable and culturally relevant multidimensional measure of family functioning (the SCORE-15). This enabled a more systemic approach to be taken when examining the association between family functioning and adolescent well-being. The current study was also the first of its kind to use a multidimensional measure of family functioning to highlight which particular dimensions of family functioning were most relevant to both adolescent reported life satisfaction and psychological well-being, which (as discussed above) has important implications for clinical practice. The SCORE-15 has also been translated and validated internationally, opening up the possibility for future comparisons of studies cross-culturally.

A majority of the measures selected for use in the current study are popular not only amongst researchers but also in clinical settings, particularly the SCORE-15, WEMWBS and the SDQ (CORC, 2014), hence the research could readily be replicated with clinical populations. Furthermore, should clinical interventions be developed aimed at promoting adolescent well-being with involvement of the family, the measures used in this study could be readily used to examine clinical outcomes.

The current study was also the first of its kind to examine the mediating role of life satisfaction and psychological well-being in the relationship between family functioning and adolescent psychopathology. The subsequent findings are of particular clinical relevance for psychologists working in the field of developmental psychopathology, as it highlights the potential utility of strengthening psychological

resources within the family to enhance the life satisfaction and psychological well-being of adolescents, which can protect against later development of externalising and internalising behaviours.

LIMITATIONS OF THE CURRENT STUDY

Design

Given the cross sectional design of the study, causation cannot be inferred. It cannot be concluded, therefore, that poorer family functioning causes lower levels of well-being which in turn causes symptoms of internalising or externalising behaviours. There does, however, appear to be an association between these variables with some degree of directionality as identified by multiple regression analyses. Previous literature suggests that family functioning and psychopathology dynamically influence each other throughout the life course (Fosco and Feinberg, 2014), and the same is likely to be true of family functioning and positive indicators of well-being. Whilst research using longitudinal designs have demonstrated a link between family functioning and adolescent life satisfaction and existential well-being one year later (Shek, 2005), research findings also exist which have shown that adolescent adjustment (including psychopathology and well-being) predicts family functioning over time (Shek, 2002). In line with family systems theories, which propose that individual and family subsystems are mutually interdependent, it is possible that the stress and strain resulting from poor adolescent adjustment is likely to influence the adolescents' ability to respond to demands placed upon them by the family, which may lead to dysfunctional patterns of behaviour within the system (Shek, 2005). Future research may benefit from using longitudinal designs with multiple time points to help clarify how these variables fluctuate and relate to one another over time.

Sample

A majority of the adolescents who participated in the current study identified as White British and came from middle to lower class backgrounds. This limits the study's external validity, and hence caution should be applied in generalising the findings to adolescents from specific cultures and socioeconomic backgrounds. Furthermore, having used a non-clinical sample in the current study, it is not clear whether the same results would be found within clinical populations, and therefore the results may not generalise to adolescents with clinical levels of depression, anxiety or problem behaviour.

The way in which the adolescents were sampled for the current study may limit the study's internal validity. Given that opportunistic sampling was used, to the discretion of the SENCo or link person of each school, it may be that the classes chosen to participate in the research were not entirely representative of the general adolescent population. Furthermore, the two schools which participated in the research provided two separate age groups, with years eight and nine coming from School A, and years ten and 11 coming from School B. Whilst the two schools were both comprehensive schools from within the same county, with similar populations in terms of ethnicity and socioeconomic status, more adolescents were at risk of clinically significant levels of difficulty from School A compared to School B. This may have been a result of selection bias, leading to the observed age related differences in internalising behaviours in the current study, when perhaps this effect does not truly exist.

Measures

In order to measure adolescents' own perceptions of family functioning, well-being and psychopathology, the current study relied on self-reported measures. It is possible that the adolescents felt the need to respond to the questionnaires in a socially desirable way when answering questions about their family's behaviour and

their own intimate thoughts and feelings. The level of difficulty reported by adolescents, therefore, may have been underreported which may have compromised the internal validity of the study. The percentage of adolescents at risk of clinically significant levels of externalising and internalising behaviours (16%), however, was higher than would be expected based on previous research with non-clinical populations (5%, Goodman, Meltzer and Bailey, 1998; 10%, Hagell, Coleman and Brooks, 2013). This would suggest that, despite using self-report measures, the adolescents were forthcoming with reporting their difficulties in relation to symptoms of psychopathology at least. Since normative data was not available for a majority of the measures used in the current study, conclusions could not be drawn as to whether the levels of family functioning, life satisfaction or psychological well-being were representative of the UK population of adolescents.

In addition to the above, the current study was limited in that family functioning was assessed from the perspective of adolescents only. Previous research has found that perceptions of family functioning vary depending on which family member is asked, and that parents often report higher levels of family functioning compared with their children (Ben-Zur, 2003; Rask et al., 2003). Furthermore, existing research has shown that the discrepancy between adolescent and parent reports of family functioning is important when considering adolescent well-being, with higher discrepancies related to poorer mental health (Stuart and Jose, 2012). Had the current study included parents' perceptions of family functioning then the results may have been different. Previous research, however, suggests that it is the adolescents' perceptions of family functioning, not their parents', which has the greatest influence on their well-being (Ben-Zur, 2003; Shek, 1997).

There has been great variability in the way in which family functioning has been operationalised in the existing literature. Given that this was the first study to examine

the role of family functioning in adolescent well-being using the SCORE-15, it has been difficult to directly compare the current findings with the existing literature as the dimensions of family functioning examined in the current study do not neatly map on to those examined in previous research. The SCORE-15, however, was chosen for its acceptability for use with adolescents, its strong psychometric properties and its clinical utility (Stratton et al., 2013).

The order in which the measures were completed was counterbalanced between participants, which resulted in 24 participants completing measures for the outcome variables before completing measures for the mediating variables. Whilst the majority of participants ($N = 88$) completed measures for the mediating variables prior to the outcome variables, the order in which these 24 participants completed their measures may have impacted upon the validity of the mediation analyses and the size of the indirect effect.

Finally, although of less relevance to the aims of the current study, was the way in which life events were assessed. A brief, six-item checklist of significant negative life events was used, which was developed in house. Previous literature has often used lengthy checklists of significant life events with established levels of reliability and validity (e.g. 48-item Life Events Checklist; Johnston and McCutcheon, 1980). Furthermore, previous research has found that it is the number of negative life events experienced which is important when considering adolescent well-being (Williamson et al., 1998; Chappel, 2011; Chappel et al., 2014) rather than whether or not the adolescent simply experienced a negative life event. If the current study had employed a more comprehensive measure of life events which assessed the number of negative life events experienced, then the results in relation to life events may have been different.

FUTURE RESEARCH

The findings of the current study provide further evidence of the important role that the family plays in adolescent well-being and adjustment. Despite the increasing recognition of the important role that well-being plays in adolescent development, the available literature on empirically based interventions to promote well-being does not compare to that of psychopathology. Furthermore, few clinical trials of interventions for adolescents with adjustment difficulties involve the family to target known family risk factors (Restifo and Bogels, 2009). One direction for future research, therefore, would be to focus on translating the existing evidence base for factors which influence adolescent well-being, such as the family environment, to interventions to promote adolescent well-being. It is essential that these interventions are then piloted with both clinical and non-clinical populations using experimental designs in order to develop the evidence base for well-being therapy and the potential role of the family within this.

The results of the current study suggested that poor family functioning may have impacted upon internalising and externalising behaviours via its impact upon adolescents' psychological well-being and life satisfaction, respectively. This pathway may have been influenced by the adolescents' individual appraisal of poor family functioning, and whether the adolescent internalises the difficulties and blames themselves, or attributes the cause of the difficulties to external factors. One important direction for future research, therefore, would be to examine other possible mechanisms (such as appraisal style) underlying the relationship between family functioning, well-being and psychopathology to gain a clearer understanding of this pathway.

It may also be interesting to examine how functioning within other systems relevant to the adolescent (for example, peers and school) may contribute to their well-being, as

it may be that these systems hold even more influence than the family system when considering well-being. Furthermore, the role of gender in the relationship between family functioning and well-being may also benefit from further investigation as this has been highlighted in previous research (Ben-Zur, 2003; Degoede, et al., 1999; McFarlane, Bellissimo and Norman, 1995; Shek, 1997; Shek, 2005) but was outside the scope of the current study.

Finally, further research in the field of adolescent development would benefit from the development of more psychometrically sound, age appropriate measures of well-being in order to begin to close the gap between research examining well-being and research examining psychopathology in adolescence. Eudaimonic well-being in children and adolescents is especially difficult to measure, and much of the existing research has relied on proxy measures or measures which have traditionally been used with adults. Whilst the current study used an age appropriate and well validated measure to assess general psychological well-being (the WEMWBS), it may have been beneficial to use a multidimensional measure of well-being in order to examine the relationship between specific dimensions of family functioning and specific dimensions of well-being. Furthermore, the existing research highlights the need for researchers to test specific models of mediating mechanisms (i.e. whether a specific mediator explains the relationship between a specific independent variable and a specific dependent variable) (Grant et al., 2006). The development of multidimensional, age appropriate measures of well-being, therefore, would also enable advances to be made in the understanding of specific mediating mechanisms between family functioning and adolescent psychopathology, to better inform psychological theory and intervention.

CONCLUSION

The present study aimed to explore the role of family functioning in adolescent mental health, as well as examining the mediating role of well-being in the relationship between family functioning and psychopathology, in a non-clinical sample of adolescents.

The finding that poor family functioning was both related to and associated with lower levels of adolescent reported life satisfaction and psychological well-being highlights the important role of the family in fostering adolescent mental health. Furthermore, the unique contribution of the family Strengths and Adaptability subscale to both life satisfaction and psychological well-being in adolescence suggests that it is the family's ability to be flexible and manage difficulties which is important when considering the impact of family functioning on adolescent mental health, regardless of whether the family experiences hostility or dysfunctional patterns of communication. These findings are consistent with the existing resiliency literature which suggests that psychological strengths can protect against poorer mental health in the face of adversity (Seligman and Csikszentmihalyi, 2000; Suldo and Huebner, 2004a).

Lastly, the finding that adolescent life satisfaction and psychological well-being play a mediating role in the relationship between poor family functioning and adolescent psychopathology offers further insight into the mechanisms underlying developmental psychopathology, which has important clinical implications. The results, however, suggested that family functioning and its relationship with externalising and internalising behaviours in adolescence may operate via different pathways (through life satisfaction and psychological well-being, respectively), and hence preventative interventions may benefit from targeting these different pathways.

Taken together, these results provide important evidence for the role that psychological strengths play (both within the family and the individual) in the development of adolescent mental health difficulties. Research must continue to explore factors which contribute to adolescent well-being (including other important relationships, such as those with peers) as well as underlying mediating mechanisms in order to develop the most effective interventions to promote well-being and protect against the development of mental health difficulties.

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APPENDICES

Appendix A. Search Terms and Results for Literature Review

Search Engine: PsychINFO, SCOPUS

Search Terms (Keywords)	Filters	Results
well-being		2,438
OR wellbeing		2,530
OR well being		2,530
OR life satisfaction	Exclude pre-1980	3,044
OR quality of life	Language: English	4,873
OR positive mental health	Population type: Human	4,899
AND family function*	Age group: Adolescence	4,873
OR parental conflict	Document type: Peer Reviewed Journal	5,010
OR family process*		5,300
OR family dynamic*		5,451
AND adolescen*		5,354
	Major heading: well-being	1,852
	Relevant titles	112
	Relevant articles (from abstracts)	27**

**Relevant articles include those measuring solely psychopathology e.g. symptoms of depression and anxiety. Eight articles examining family or parental dynamics and subjective and psychological well-being were found, all conducted in China.

Appendix B. Demographics Questionnaire

ABOUT YOU...

1. Date of birth

Day_____ Month_____ Year_____

2. What year are you in at school? Please circle

Year 8 Year 9 Year 10 Year 11

3. What is your gender? Please circle

Male Female

4. How would you describe your ethnic background? Please circle

White White British White Irish White Other	Black or Black British African Caribbean Other Black	Mixed Mixed White and Black Caribbean Mixed White and Black African Mixed White and Asian Other Mixed
Asian or Asian British Indian Pakistani Bangladeshi Other Asian	Chinese	Any other ethnic group Please state: _____

5. What level of education did your father/carers complete? Circle the highest level that was completed

Primary school

High school/Secondary school

Undergraduate university degree

Postgraduate university degree (Ma, Ph.D, M.D, law degree etc.)

Don't know



6. What level of education did your mother/carer complete? Please circle the highest level completed

Primary school

High school/Secondary School

Undergraduate university degree

Postgraduate university degree (Ma, Ph.D, M.D, law degree etc.)

Don't know

7. If your father/carer works, what does he do for a job?

8. If your mother/carer works, what does she do for a job?

9. Are you currently having counselling for anxiety, low mood or other difficulties? Please circle your answer

Yes

No

10. Have you ever had counselling as part of a child and adolescent mental health service? Please circle your answer

Yes

No

11. Have you ever had an assessment of your well-being from a mental health service? Please circle your answer

Yes

No

12. If you circled 'Yes' for Questions 9, 10 or 11, were any of the following terms used to describe your difficulties? Please circle all that are relevant to you.

Depression	Anxiety	Post-Traumatic Stress
Anorexia	Phobia	Attention Deficit/ Hyperactivity
Panic	Bulimia	Conduct Disorder
Obsessive-Compulsive	Other (please state)	

13. Are you currently on any medication to help with any of the difficulties mentioned above? Please circle your answer.

No Yes

14. Have you experienced any of the following events in the last year?
Please circle all that are relevant to you.

Moved house	Separation or divorce of parents/carers
Moved school	Been seriously ill
Death of a family member or friend	Parent/carer/sibling been seriously ill

Appendix C. The Systemic Clinical Outcome and Routine Evaluation Scale

SCORE 15

Site Code□□□ Family Number□□□ Family Position

Describing your family (Date.....)

We would like you to tell us about how you see your family at the moment. So we are asking for YOUR view of your family.

When people say 'your family' they often mean the people who live in your house. But we want you to choose who you want to count as the family you are going to describe.

For each item, make your choice by putting ☒ in just one of the boxes numbered 1 to 5. If a statement was "We are always fighting each other" and you felt this was not especially true of your family, you would put a tick in box 4 for "Describes us: not well".

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------	--------------------------

Do not think for too long about any question, but do try to tick one of the boxes for each question.

	1. Describes us: Very well	2. Describes us: Well	3. Describes us: Partly	4. Describes us: Not well	5. Describes us: Not at all
For each line, would you say <u>this describes our family:</u>					
1) In my family we talk to each other about things which matter to us					
2) People often don't tell each other the truth in my family					
3) Each of us gets listened to in our family					
4) It feels risky to disagree in our family					
5) We find it hard to deal with everyday problems					
6) We trust each other					
7) It feels miserable in our family					
8) When people in my family get angry they ignore each other on purpose					
9) We seem to go from one crisis to another in my family					
10) When one of us is upset they get looked after within the family					
11) Things always seem to go wrong for my family					
12) People in the family are nasty to each other					
13) People in my family interfere too much in each other's lives					
14) In my family we blame each other when things go wrong					
15) We are good at finding new ways to deal with things that are difficult					
	1.	2.	3.	4.	5.

Appendix D. The Multidimensional Students' Life Satisfaction Scale

Multidimensional Students' Life Satisfaction Scale

(Huebner, 1994)

Directions: We would like to know what thoughts about life you have had during the past several weeks. Think about how you spend each day and night and then think about how your life has been during most of this time. Here are some questions that ask you to indicate your satisfaction with your overall life. Circle the words next to each statement that indicate the extent to which you agree or disagree with each statement.

It is important to know what you REALLY think, so please answer the questions the way you really think, not how you should think. This is NOT a test. There are NO right or wrong answers.

1. My friends are nice to me					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
2. I am fun to be around					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
3. I feel bad at school					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
4. I have a bad time with my friends					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
5. There are lots of things I can do well					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
6. I learn a lot at school					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
7. I like spending time with my parents					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
8. My family is better than most					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
9. There are many things about school I enjoy					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
10. I think I am good looking					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
11. My friends are great					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
12. My friends help me if I need it					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
13. I wish I didn't have to go to school					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree

14. I like myself					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
15. There are lots of fun things to do where I live					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
16. My friends treat me well					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
17. Most people like me					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
18. I enjoy being at home with my family					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
19. My family gets along well together					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
20. I look forward to going to school					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
21. My parents treat me fairly					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
22. I like being in school					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
23. My friends are mean to me					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
24. I wish I had different friends					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
25. School is interesting					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
26. I enjoy school activities					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
27. I wish I lived in a different house					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
28. Members of my family talk nicely to one another					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
29. I have a lot of fun with my friends					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
30. My parents and I do fun things together					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
31. I like my neighbourhood					
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree

Disagree	Disagree	Disagree	Agree	Agree	Agree
32. I wish I lived somewhere else					
Strongly	Moderately	Mildly	Mildly	Moderately	Strongly
Disagree	Disagree	Disagree	Agree	Agree	Agree
33. I am a nice person					
Strongly	Moderately	Mildly	Mildly	Moderately	Strongly
Disagree	Disagree	Disagree	Agree	Agree	Agree
34. This town is filled with mean people					
Strongly	Moderately	Mildly	Mildly	Moderately	Strongly
Disagree	Disagree	Disagree	Agree	Agree	Agree
35. I like to try new things					
Strongly	Moderately	Mildly	Mildly	Moderately	Strongly
Disagree	Disagree	Disagree	Agree	Agree	Agree
36. My family's house is nice					
Strongly	Moderately	Mildly	Mildly	Moderately	Strongly
Disagree	Disagree	Disagree	Agree	Agree	Agree
37. I like my neighbours					
Strongly	Moderately	Mildly	Mildly	Moderately	Strongly
Disagree	Disagree	Disagree	Agree	Agree	Agree
38. I have enough friends					
Strongly	Moderately	Mildly	Mildly	Moderately	Strongly
Disagree	Disagree	Disagree	Agree	Agree	Agree
39. I wish there were different people in my neighbourhood					
Strongly	Moderately	Mildly	Mildly	Moderately	Strongly
Disagree	Disagree	Disagree	Agree	Agree	Agree
40. I like where I live					
Strongly	Moderately	Mildly	Mildly	Moderately	Strongly
Disagree	Disagree	Disagree	Agree	Agree	Agree

Appendix E. The Warwick-Edinburgh Mental Well-Being Scale

The Warwick-Edinburgh Mental Well-being Scale (WEMWBS)

Below are some statements about feelings and thoughts.

Please tick the box that best describes your experience of each over the last 2 weeks

STATEMENTS	None of the time	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic about the future	1	2	3	4	5
I've been feeling useful	1	2	3	4	5
I've been feeling relaxed	1	2	3	4	5
I've been feeling interested in other people	1	2	3	4	5
I've had energy to spare	1	2	3	4	5
I've been dealing with problems well	1	2	3	4	5
I've been thinking clearly	1	2	3	4	5
I've been feeling good about myself	1	2	3	4	5
I've been feeling close to other people	1	2	3	4	5
I've been feeling confident	1	2	3	4	5
I've been able to make up my own mind about things	1	2	3	4	5
I've been feeling loved	1	2	3	4	5
I've been interested in new things	1	2	3	4	5
I've been feeling cheerful	1	2	3	4	5

Warwick-Edinburgh Mental Well-Being Scale (WEMWBS)
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Appendix F. The Strengths and Difficulties Questionnaire

Strengths and Difficulties Questionnaire

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain or the item seems daft! Please give your answers on the basis of how things have been for you over the last six months.

Your Name

Male/Female

Date of Birth.....

	Not True	Somewhat True	Certainly True
I try to be nice to other people. I care about their feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am restless, I cannot stay still for long	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get a lot of headaches, stomach-aches or sickness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually share with others (food, games, pens etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get very angry and often lose my temper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am usually on my own. I generally play alone or keep to myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually do as I am told	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I worry a lot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am helpful if someone is hurt, upset or feeling ill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am constantly fidgeting or squirming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have one good friend or more	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I fight a lot. I can make other people do what I want	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am often unhappy, down-hearted or tearful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other people my age generally like me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am easily distracted, I find it difficult to concentrate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am nervous in new situations. I easily lose confidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am kind to younger children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am often accused of lying or cheating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other children or young people pick on me or bully me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I often volunteer to help others (parents, teachers, children)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think before I do things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I take things that are not mine from home, school or elsewhere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get on better with adults than with people my own age	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have many fears, I am easily scared	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I finish the work I'm doing. My attention is good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Your signature

Today's date

Thank you very much for your help

© Robert Goodman, 2005

Appendix G. Information Sheet and Consent Form for Parents

Dear Parent/Carer,

Re: Adolescent Well-Being Project at [school name]

I am a Trainee Clinical Psychologist at Royal Holloway University, and I am completing a project that aims to widen our understanding of the factors which contribute to adolescent well-being. I am particularly interested in what helps young people to feel good about themselves and their lives. The information I gather will further our understanding of adolescent well-being and how best to promote well-being in this age group.

What does the project involve?

I have partnered up with [school name] in order to carry out this project and I will be attending one of your child's form times in [date]. Students will be given four short questionnaires to complete that will ask them about their friends, family and health, as well as how they feel about themselves. Your child's answers will be kept entirely confidential and their names will not be attached to their answers. In the unlikely case that your child's answers were to raise any concerns, I will contact their form tutor who will then invite you to discuss with them how best to support your child. We may also write to you outlining the concerns.

I have worked closely with staff at the school to ensure that participating in this project does not hinder your child's educational timetable.

How will the project benefit your child?

The results of this project will contribute to the development of school based interventions to promote adolescent well-being. Furthermore, all students who take part will be placed in a prize draw to win one of five educational gifts, worth £10.

Your child's participation in this project is entirely voluntary. If you would NOT like your child to participate in the research project, please complete the form below and hand it back to your child's form tutor. Your child will also be given the opportunity to withdraw from the project at any time.

If you would like to discuss the project further or have any questions regarding your child's participation, please feel free to contact me at carly.butler.2012@live.rhul.ac.uk.

Yours sincerely,

Ms Carly Butler
Trainee Clinical Psychologist
Royal Holloway University, London

Dr Helen Pote
Clinical Psychologist
Royal Holloway University, London

Adolescent Well-Being Project at [school]

I would NOT like (*child's name*) of
(*child's form class*) to participate in the research project during
his/her form time. Please arrange for my child to complete alternative work during this
lesson.

Name:

Signature:

Date:

**Handing in this form means that your child will NOT be taking
part in the project**

Appendix H. Information Sheet for Adolescents

Information Sheet: Investigating Well-Being in Adolescents

Hello! My name is Carly and I'm a trainee clinical psychologist. This means I'm learning how to help children, young people and adults with problems they may have in their lives, and with difficult emotions like anxiety or sadness. I will be coming along to one of your form times in November to ask for your help with my project at Royal Holloway University.

What's the project about?

I'm working with your school to try and understand what helps young people, like yourselves, feel good about themselves and their lives.

To do this I'm going to ask you to complete some short questionnaires (during your form time) which will ask you about yourself, your family and school life, your friends and how you've been feeling recently. It will take about 25 minutes to complete all the questionnaires.

Do I have to take part?

If you don't want to take part then that is OK - your tutor can arrange for you to do something else during the form time. You can also change your mind at any time, even after you've completed the questionnaires.

If you do complete the questionnaires, you will be entered in to a prize draw to win one of five £10 Amazon vouchers!

What will happen with my answers?

Your answers will be used to help me with the project I'm doing but no-one else will know how you answered the questions as your name will not be written in my project. If from your answers I think you might need support with anything, then I will let your teacher know. If this is the case, your teacher might speak to you and your parents too.

If you have any questions about the project, feel free to drop me an email at carly.butler.2012@live.rhul.ac.uk.

Best wishes,

Carly

Adolescent Well-Being

A Trainee Clinical Psychologist, Carly Butler, from Royal Holloway University will be coming to the class on:

Carly would like your help with some research she is doing in to well-being in adolescents. She is interested in what helps adolescents to feel good about themselves and their lives, and will be asking you to complete some short questionnaires during your form time.



Hello! I'm Carly. If you would like to know more about my project, you can email me on carly.butler.2012@live.rhul.ac.uk

I look forward to meeting you!



Appendix J. Consent Forms for Adolescents

Investigating Well-Being in Adolescents

Please tick the boxes below if you agree with the following statements:

<ul style="list-style-type: none">• I understand the information sheet and have had the opportunity to ask Carly questions.	<input type="checkbox"/>
<ul style="list-style-type: none">• I understand that I can stop taking part at any time without giving a reason and that this will not affect my education.	<input type="checkbox"/>
<ul style="list-style-type: none">• I agree to take part in the project.	<input type="checkbox"/>

Your Name

Your Tutor Group

Today's Date

All the information you provide will be confidential and will not be seen by anyone other than the researchers involved in this project.

This sheet will be kept separate from your questionnaires so your name will not be linked to your answers.

Appendix K. Ethical Approval

014/015 Ethics Form Approved

Psychology-Webmaster@rhul.ac.uk

Wed 4/2/2014 8:00 PM

Inbox

To: nxjt007@rhul.ac.uk; Pote, H;

Cc: PSY-EthicsAdmin@rhul.ac.uk; Leman, Patrick; Lock, Annette;
umjt001@rhul.ac.uk;

Application Details: View the form click [here](#) Revise the form click [here](#)

Applicant Name: **Carly Butler**

Application title: **The association between family functioning and positive indicators of adolescent well-being**

Comments: **Approved.**

Appendix L. Example Letter to Parents Following Elevated Scores on SDQ

To the Parents/Carers of [student name],

Re: Adolescent Well-Being Project

As you will be aware, you gave permission for [student name] to be involved in a project at [school name] led by Carly Butler, Trainee Clinical Psychologist, and Dr Helen Pote, Clinical Psychologist. They have been investigating different factors which contribute to adolescent well-being.

We informed you that if any concerns arose whilst evaluating the questionnaires completed by your child then we would let you know. [Student name] scored higher than average on the Strengths and Difficulties Questionnaire, a measure of emotional and behavioural difficulties. [Student name] showed an elevated score for items relating to emotional and behavioural difficulties, including hyperactivity and inattention. This is not a clinical assessment, but it does highlight that [student name] was experiencing some difficulties when completing this questionnaire in [month].

We invite you to contact [the school SENCo/pastoral team/tutor] to discuss any concerns you may have about your child's well-being. If you have serious concerns and would like to access further support, you may wish to discuss this with your GP.

Yours sincerely,

[Head Teacher Name]

Head Teacher

Carly Butler

Trainee Clinical Psychologist

Appendix M: Sample Demographic Information

	N	% of total
Gender (N = 112)		
Male	58	52
Female	54	48
Ethnicity (N = 112)		
White British	74	66.1
White Irish	3	2.7
White Other	7	6.3
Black African	3	2.7
Pakistani	6	5.4
Bangladeshi	2	1.8
Indian	2	1.8
Mixed	14	12.5
Other	1	0.9
Parental Education (N = 79)		
Secondary School	42	53.2
Undergraduate	21	26.6
Postgraduate	16	20.3
Parental Occupation (N = 102)		
Higher Management/Professional Occupation	7	6.8
Lower Management/Professional Occupation	20	19.6
Intermediate Occupation	13	12.7
Own Account Worker/Self-Employed	13	12.7
Lower Technical Occupation	20	19.6
Semi-Routine Occupation	17	16.6

Routine Occupation	4	3.9
Unemployed	8	7.8
Involvement with Mental Health Services (N = 112)		
Currently receiving support from mental health service	7	6.3
Received support from mental health service in the past	12	10.7
Diagnosed with a mental health problem	15	13.4
Depression	4	3.6
Anxiety (inc. Panic, PTSD, OCD, phobia)	4	3.6
Mixed depression and anxiety	4	3.6
Eating disorder	1	0.9
Neurodevelopmental disorder (inc. ASD, ADHD)	3	2.7
Other	2	1.8
Significant Life Event in past 12 months (N = 112)		
None	66	58.9
Parents Separated	9	8.0
Death of family member or friend	20	17.9
Moved House	17	15.2
Moved School	7	6.3
Been seriously ill	4	3.6
Parent or sibling been seriously ill	12	10.7

Note: 'Higher Management/Professional Occupation' includes Company Director, Chief Executive, Doctor, Barrister; 'Lower Management/Professional Occupation' includes Nurse, Scientist, Lower Managers in large companies; 'Intermediate Occupation' includes Journalist, Photographer, Surveyor; 'Lower Technical Occupation' includes Builder, Plumber, Electrician; 'Semi-Routine Occupation' includes Nursing Assistant, Teaching Assistant; 'Routine Occupation' includes Waitress, Postman, Bus Driver. Diagnoses and life events are not mutually exclusive.

Appendix N: Results of Preliminary Analyses

Correlation coefficients between age and family functioning, well-being and psychopathology

		SCORE	MSLSS	WEMWBS	SDQ: INT	SDQ: EXT
Age	Pearson's <i>r</i>	-.00	-.10	-.08	-.20*	-.15
	Sig (2-tailed)	.993	.276	.408	.035	.115

Note: SCORE = family functioning; MSLSS = life satisfaction; WEMWBS = psychological well-being; SDQ: INT = internalising behaviours, and SDQ: EXT = externalising behaviours.

* $p < .05$

T-test results comparing males and females on their scores on measures of family functioning, well-being and psychopathology.

	Males		Females		<i>df</i>	<i>t</i>	<i>p</i>
	N	<i>M (SD)</i>	N	<i>M (SD)</i>			
SCORE	58	30.9 (9.3)	54	33.3 (8.9)	110	-1.40	.165
MSLSS	58	117.7 (25.2)	54	179.8 (21.1)	110	-.47	.638
WEMWBS	58	49.6 (8.7)	54	47.2 (8.4)	110	1.45	.149
SDQ: INT	58	3.7 (2.3)	54	5.9 (2.6)	110	-4.83	.000***
SDQ: EXT	58	6.0 (2.7)	54	5.8 (2.6)	110	.56	.579

*** $p < .001$

T-test results comparing adolescents who did and did not experience significant life events in the past 12 months on scores of family functioning, well-being and psychopathology.

	Sig Event: Yes		Sig Event: No		df	t	p
	N	M (SD)	N	M (SD)			
SCORE-15	46	33.9 (9.0)	66	30.7 (9.1)	110	1.8	.068
MSLSS	46	117.9 (23.3)	66	179.3 (23.3)	110	-.32	.749
WEMWBS	46	48.5 (9.4)	66	48.4 (8.0)	110	.05	.964
SDQ: INT	46	5.6 (2.6)	66	4.2 (2.7)	110	2.9	.004**
SDQ: EXT	46	6.2 (2.6)	66	5.7 (2.7)	110	.85	.400

** $p < .01$

ANOVA results comparing adolescents from high, middle and low socioeconomic status on scores of family functioning, well-being and psychopathology.

	High SES	Middle SES	Low SES	N	df	F	p
	M (SD)	M (SD)	M (SD)				
SCORE	31.1 (8.6)	31.6 (8.5)	32.5 (10.9)	102	3, 98	.07	.976
MSLSS	177.1 (22.8)	178.3 (21.6)	186.8 (23.2)	102	3, 98	.85	.472
WEMWBS	51.3 (9.5)	48.1 (8.4)	50.7 (7.7)	102	3, 98	.74	.529
SDQ: INT	4.2 (2.4)	4.7 (2.6)	5.0 (2.9)	102	3, 98	1.7	.167
SDQ: EXT	6.3 (2.8)	5.8 (2.7)	5.7 (3.1)	102	3, 98	.63	.597

Note: High = Higher Management/Professional Occupations; Middle = Lower Management/Professional Occupations, Intermediate Occupations, Self-Employed, Lower Technical Occupations; Lower = Semi-Routine Occupations and Routine Occupations.

